THE

MERCHANTS' MAGAZINE

AND

COMMERCIAL REVIEW.

AUGUST, 1861.

THE RAIL-ROAD SYSTEM OF MASSACHUSETTS.

I. Wealth of Massachusetts. II. The first Canal and the first Rail-Road. III. Early Rail-Road progress in the Commonwealth. IV. Financial Policy. V. Rail-Road Extension to Albany. VI. The Revulsion of 1857. VII. Horse Rail-Roads. VIII. The Boston and Worcester Rail-Road. IX. The Boston and Lowell Rail-Road. X. The Boston and Providence Rail-Road. XI. The Eastern Rail-Road. XII. The Boston and Maine Rail-Road. XIII. The Fitchburg Rail-Road. XIV. The Fall River Rail-Road. XV. The Boston and New-York Central Rail-Road. XVI. The Western Rail-Road. XVII. The Troy and Greenfield Rail-Road. XVIII. Conclusions.

The Commonwealth of Massachusetts, at the close of the Revolution, was deeply in debt. It had made great sacrifices, both of blood and treasure, and its public debt exceeded the value of its soil, and of all its goods, chattels and other convertible property. Seventy-eight years have elapsed since the close of the war, and energy, skill and frugality, although planted on a rock, and in an area less than one-fourth that of South Carolina, have done their work.

The Commonwealth has extinguished its debt, survived the successive shocks given to its commerce by the French war, the embargoes, the restrictive acts, the loss of the first navy, the second war with England, tariffs and repeals of tariffs, and now exhibits a population of a million and a quarter, actually more than 170 to the square mile, and an amount of wealth assessed by the census of 1860 at $897,000,000.

In this valuation many omissions occur. Little or no account is taken of deposits in savings banks, which now contain fifty millions. At least two hundred dollars in stock and furniture for each family in the State are free from assessment or seizure, and not returned in the valuation. This will amount to fifty millions more.

Nor is anything included in this valuation for the property of the State.

The navy yard, courts, custom-houses and arsenal of the United States.

The schools, colleges, court-houses, vacant land and other property of towns, cities and counties.

The churches and other religious edifices, with the addition of these and the omissions of the assessors, who overlook a large part of the personal property, it would be safe to compute the wealth of the State as exceeding twelve hundred millions of dollars, and averaging one thousand dollars for every person in the Commonwealth.

The railway system has contributed much to this wealth. It has given new value to lands and waterfalls. It has cheapened the movement of materials and products, now estimated at four hundred millions annually. It has furnished new inlets for salt, plaster, coal and breadstuffs.

During the decade from 1840 to 1850, when it expanded most, the valuation of the State rose from three hundred to six hundred millions, and during the last decade, when the expansion was less active, at least two hundred and ninety-seven millions more were added to the aggregate, and Massachusetts to-day exhibits an average of property *per capita* equal to that of Great Britain, enriched by the accumulation of twenty centuries, for her aggregate to-day, for thirty millions of people, is rated by the Edinburgh *Review* at six thousand millions sterling.

This progress, of course, is not to be ascribed to the railway system alone. Nor is it due to the soil or climate, for they allow but few products to be raised. Nor is it due to artificial stimulants in the shape of tariffs, for Massachusetts has adapted herself to all systems, and asks no tariff to-day except such as the nation requires for revenue. Much is doubtless due to the inborn energy of her people and to her system of schools, by which her labor has been educated and her male operatives been enabled to average at least thirty-five dollars per month, while her female operatives have averaged at least sixteen; but one of the most effective pieces of mechanism she has set in motion by her educated labor has been the railway system.

It has superseded canals, stages and teams, adapted itself to the ice and snow of her winters, successfully crossed her ranges of mountains, and, to some extent, superseded her coast navigation.

II. Massachusetts commenced early in the career of improvement, and built the first canal and the first rail-road in the United States. Soon after the Revolution she began the Middlesex Canal, to unite the Merrimac River with Boston. Capital was then limited, but the work was completed before 1808, and when, long afterwards, New-York commenced her Erie Canal, her commissioners came on to Massachusetts to examine the locks of the Middlesex.

The Quincy Rail-Road followed, and upon this the stone for the Bunker Hill Monument was carried, by horse-power, on cars connected by framework, which are supposed to have first suggested the idea of the long passenger-car. This rail-road preceded the Baltimore and Ohio and Albany and Schenectady Rail-Roads, the first passenger line of this country.

III. No material progress, however, was made in railways until 1834, when sections of the Boston and Worcester, Boston and Lowell and Boston and Providence lines were opened, and the locomotive set in motion.

The public are indebted to the *Railway Times*, of Boston, for a series of tables which exhibit the progress of our railway system, and furnish a large amount of valuable data, from which the public may draw many inferences.

It appears by these tables, that in 1842 there were completed in Mas-

sachusetts 431 miles of rail-road, and in the succeeding fourteen years these increased to 1,325, an average growth of fifteen per cent. per annum. Since 1856, the entire growth in Massachusetts has been but forty-six miles, or less than four per cent. per annum. With few exceptions, the whole State has been threaded by rail-roads, and sixty miles more now in progress, or contemplated, will carry them through the Deerfield Valley, and to the extremities of Cape Ann and Cape Cod, and leave but little space for future expansion. There has been, however, and probably will continue to be, a perceptible improvement in the condition of the lines of Massachusetts; and, besides the main lines and branches, more than five hundred and forty miles of second tracks and sidings have been laid down in Massachusetts.

In 1842 the cost of the lines in this State amounted to $19,241,000; in 1860 it had risen more than two hundred per cent.—to $60,107,000. In 1842 rail-roads had received a check, and became comparatively stationary; but in 1845 they received a new impulse, and from that period to 1851 the outlay for construction became large, averaging more than five millions yearly, and rising in the last named year to fourteen millions of dollars.

IV. The outlay continued, on a reduced rate, to 1856, when the cost had risen to sixty-three millions; but from 1856 to 1861 a portion of the income had been applied to reduce construction, and a diminution of nearly three millions in cost has thus been effected, while the equipage and stations have been enlarged, and the tracks extended forty-six miles.

The average net income of the lines appears to have grown from 5.26 per cent. on cost in 1842, until in 1847 it culminated at 7.95 per cent. From this point it gradually declined to 5.68 per cent. in 1855. It is again in the ascendant, having risen from this to 7.10 per cent. in 1860. Upon recurring to the income of the lines, it appears that the gross revenue has risen from $1,971,787 in 1842, to $9,936,391 in 1860; so that, while the length and cost of lines have trebled, the income has increased at least five-fold in the same period. The movement in revenue, although at times irregular, has been constantly progressive. From 1842 to 1845 the passenger revenue increased at an average rate of eight per cent. annually. From 1845 to 1850 it gained 22 per cent. annually; from from 1850 to 1856, 7 per cent.; from 1856 to 1860, 1 per cent. The income from freight has increased more uniformly. From 1842 to 1845 it averaged an annual gain of 22 per cent.; from 1845 to 1852, 15 per cent.; from 1852 to 1860, 10 per cent. And now the income from freight exceeds that from passengers, and defrays seven-eighths of the expenses of maintaining the whole railway service of the State.

The number of passengers transported annually has increased to 12,389,598, and the tons transported to 3,912,379.

Upon referring to the expense account, we find a very slow and gradual rise from 72 cents per mile run in 1842, to 76 cents in 1851; but for the succeeding six years the rate rapidly advanced from 76 cents to $1 10 per mile in 1857, an increase of at least 44 per cent. From 1857 the cost has rapidly declined to 89 cents per mile in 1860; and there is reason to believe, that if tolls and interest, now included in expenses by some of the rail-roads, were omitted, the rate would stand to-day below 83 cents per mile traversed.

These data shed some light upon the history of the past.

V. In 1843 the revival of business under the new tariff, the extension of the Western Rail-Road to Albany, and a reduction on railway charges, gave a new impulse to the system. Many lines were commenced, and much capital took this direction. Large returns of net income in 1847, when the Irish famine gave another impulse to travel and business, drew more capital into railways, and a rapid expansion followed.

The check given to manufactures by the tariff of 1846, which threw burthens on the raw material, drew still more capital into railways, and for one or two years Massachusetts devoted, at home and abroad, at least twenty to thirty millions annually to rail-roads.

With the discovery of gold in California and the expansion of rail-roads in other States, there came an increased demand for capital and artisans; interest and wages advanced; competition arose; renovation became necessary; expenses increased, and heavy losses and sacrifices followed.

VI. The net income declined, and the value of stocks depreciated as a necessary consequence.

This decline, and the shock given by 1857 to credit and to enterprise, again reduced prices and taught economy. The number and speed of trains were reduced; supernumeraries were discharged; materials and wages fell; coal was substituted for wood, with great advantage; debts were funded, and income applied to the reduction of indebtedness.

As cost was thus diminished, the natural growth of business, which has attended rail-roads in every country, aided by a diminution of expense, has promoted recovery; stocks have again risen from their depression. They are fast recovering the confidence of the public, and are again considered a safe and remunerative class of investments.

Some effects have followed the growth of railways in Massachusetts which deserve the attention of the political economist:

First.—They have superseded three important canals, which were once in active use, the Middlesex, the Hampshire and Hampden, and the Blackstone, with a series of works on the Connecticut and Merrimac. Cheap and rapid transit on lines which crossed both rivers and mountains and bid defiance to winter's ice and snow, diverted the traffic from the slow canal with its wearisome lockage, ice-bound half the year. Canals are now abandoned in Massachusetts.

Second.—They have greatly stimulated the growth of cities and villages, attracting population and manufactures to the line of the iron way. The growth of population in Massachusetts, still more than two per cent. annually, is confined to cities and villages. Some of the inferior farms have been devoted to the production of fuel, in many places worth $3 per cord as it stands, although other farms are more highly cultivated.

Third.—The freight has grown with more rapidity than the passenger traffic. In 1842 it furnished but one-third the revenue; now it supplies more than half, and still continues to gain upon passengers. Much of this freight may be regarded as the creation of the railway. Masses of ice, coal and timber are thus set in motion, and made tributary to commerce and useful to the world.

Fourth.—The State is able, by its railway system, to convene its people, to concentrate its whole military force upon a single point and in a single day, upon a few hours' notice. The votes of two hundred

thousand citizens are announced the morning after the polls are closed. Immense bodies are collected on festive days, and in the event of any attack upon the State, this power of rapid concentration and action will be most effective for the common defence.

Fifth.—The effects of high and low prices have been effectually tested. The charge for passengers has ranged from 4½ to 2 cents per mile, upon various lines and at various periods. Competition, experiment and success have reduced prices to the lower standard, and with the growth of expenses and in periods of depression they have again advanced.

Low prices increased numbers, stimulated building and promoted the growth of traffic, while they have awakened the jealousy of stockholders engaged in trade, who usually look to the advance of prices as the sure road to wealth.

The result has been, that the public mind is settling down upon the rate of 2 to 3 cents per passenger a mile for the long traffic, and 2 cents per mile for the short traffic, with a charge for season tickets equivalent to 1 or 1½ cents a mile for each passage.

The freight is allowed to vary according to value, quantity, distance and gradients, from 1½ to 8 cents per mile.

Sixth.—The rail-roads of Massachusetts have gradually reduced their debt until it now constitutes less than one-fourth of the capital of our companies, and their policy seems to be to effect its extinguishment. Out of debt, out of danger, is the lesson taught them by experience. Of late years they have reserved nearly a fourth of their income for reduction of debt and improvements, and now hold nearly six millions in surplus and sinking funds.

Seventh.—Another effect has attended the growth of rail-roads and their extension through the streets of cities, viz., the introduction of an admirable system of horse railways—a minor edition of the rail-road itself.

VII. During the year 1860, fifty-seven miles of horse railways have been in operation in Massachusetts, and by the close of the year two of them were extended from Boston to Lynn, on lines ten to eleven miles in length; and during 1860, 13,695,000 passengers (actually more than on the steam roads) were transported upon the horse railways of Massachusetts, at an average charge of about 2 cents per mile.

The cost of these lines is now reported as close upon three millions; their net revenue is 9 per cent., and the cost of conducting them is rated at 20 cents in the cities and 15 cents in the country for each mile run by the two-horse cars, which transport usually not far from an average of fifteen passengers. The cost of transportation is thus apparently 1 to 1½ cents per passenger a mile, and where passengers abound, a charge of two cents per mile is found amply remunerative.

Although the cost of these lines has been greatly enhanced by experiments and by a process known as watering the stock, viz., by issues at a fictitious cost, it is now generally understood that a horse railway can be made of good quality, at a cost of $5,000 per mile on country roads, and $10,000 to $15,000 per mile in cities, exclusive of the equipage, stables and changes of grade.

We have thus glanced at the general system of the State, its progress,

its trials and its effects. To appreciate it better, it is desirable to examine some of the leading rail-roads of Massachusetts.

VIII. *The Boston and Worcester Rail-Road.*—This road is one of the pioneer lines of the State. In the early spring of 1834, the first section of ten miles was opened for use, and on the morning of the first of May the locomotive was set in motion. There was no bonnet upon the engine, and a large party of ladies, with their beaus, enlivened by a host of sparks, made their first excursion by steam from Boston into the country.

This line commenced with very limited means; and having no direct natural valley to follow, a devious route was pursued, conforming closely to the surface, with a ruling gradient of thirty feet to the mile, and a narrow location was adopted. A light edge rail, weighing less than forty pounds to the yard, was introduced and laid, principally upon ties of white cedar embedded in the primitive soil, and little space was allowed for drainage.

The company were induced, by a grant of several acres of land, at a nominal price, to establish their Boston station upon the South Cove; but in the provision of land and buildings, the growth of business was greatly underrated. The provision for freight consisted of an open yard, with a small wharf, store and freight-house, which would not receive at once more than two or three long cars.

From 1834 to 1840, the whole capital raised was but $1,840,000.

The equipage of the line consisted, for several years, of a few light engines and single cars, for both freight and passengers, some of which were imported from England. Worcester was then a village with four or five thousand people, whose trade sought the New-York and Providence markets by the Blackstone Canal. It offered so little merchandise, that for some time the average freight from Worcester to Boston did not exceed twelve tons per train. Until the close of 1839, the line drew a very moderate income from its light local traffic. Its rails were injured, its tracks disturbed by frost, its cars and engines worn out by use or gone out of fashion, and its dépôts unsuited to the day. Its charges had been as high as 4½ cents per passenger a mile, and its rate for freight up to 7 to 8 cents per ton a mile, from which rates it with difficulty paid a moderate dividend, and accidents frequently occurred, from the deterioration of its tracks and engines.

But in 1839 the Norwich and Worcester and the Western Rail-Roads were opened, from tide-water at Norwich and the navigable waters of the Connecticut at Springfield, into Worcester, and a new impulse was given to the Boston and Worcester line. An investigating committee, in 1846, reported its defects, and suggested some of the remedies to the stockholders, and prompt measures were taken for its renovation. The capital was rapidly increased, by stock and bonds, from $1,840,000 to $5,500,000, three times the original amount; the road-bed was raised, widened and graveled, new rails were provided, a second track laid, branches opened, and superior engines and long cars purchased. Several acres of land were obtained, at high prices, and extensive dépôts and engine-houses erected, and the revenue rapidly increased, and the dividends soon rose to eight per cent. per annum.

For a time the directors adhered to their system of high prices, and induced the Western Railway to charge $6 50 per ton and $3 75 per

passenger between Boston and Springfield, and business was thus for a time repelled; and when the Western Rail-Road adopted rates very nearly the same as those now established, the Boston and Worcester line declined to take a *pro rata* share, and commissioners were called in to adjust the difference; but gradually moderate rates were established, special trains, with season tickets and low fares, were set in motion, and now the Boston and Worcester Rail-Road exhibits a line fringed with villages, villas and suburban residences, and has raised its revenue from $210,000 in 1837 to more than a million in 1860. It has, doubtless, in the past, shown some want of prescience. It has made more branches than are profitable; the renovation of its tracks and road-bed, and the acquisition of land after use have enhanced its value, and doubtless carried its capital to an unnecessary height; but in the past ten years its cost has been reduced from income more than half a million. It divides eight per cent., and it is now conducted, by its present officers, with a degree of promptitude, efficiency and success alike acceptable to the public and the shareholders.

IX. *The Boston and Lowell Rail-Road.*—This line, from Boston to Lowell, twenty-five miles, was constructed at the same time with the Boston and Worcester, and considered a very bold experiment, as it run nearly parallel with the Middlesex Canal. Its engineer aimed at a level route, and its gradients, except for a few feet near its Lowell terminus, did not exceed ten feet to the mile, and heavy expenses in cuts and embankments were incurred to secure this gradient and curves of large radius. Road crossings were generally avoided, extensive dépôt grounds and accommodations were obtained at Cambridge and Boston, a liberal provision was made for the future, and a second track was soon provided. The fish-belly rail, popular in England, was first selected, and laid down upon stone cross-ties, upon a well-ballasted surface. These ties have proved less elastic and durable than those of wood. The cost of the line in 1837 was but $1,500,000, but it was carried soon after, by the completion of its second tracks and dépôt grounds, to $1,800,000; and, with a slight addition of debt for new equipage and the short branch at Woburn, the capital, for some twenty years, has continued stationary.

The stand-still policy has, until very recently, been the policy of the Boston and Lowell line; and this is almost as dangerous as the expansion policy. While the city of Lowell and the local business were annually progressive, other parties took up the subject of branches, and shaped them so as to divert the legitimate business of the Boston and Lowell line. A line was carried from Nashua to Worcester, diverting largely from the trunk line. The Manchester and Lawrence line made another diversion from the trunk line. The Lowell and Salem Rail-Road became another competitor, and, crossing the Boston and Maine, which might easily have been retained as a tributary, competed for all the heavy freight of the factories, and for a part of the Boston passenger. The Fitchburg line diverted also a business that might have been attracted to the Boston and Lowell and the trunk of the Boston and Lowell line. Like a solid oak, stripped of its leaves and denuded of its branches, it stood for a time almost in solitary grandeur, a warning to other lines not to neglect branch accommodation. Its stock declined from a high premium to about fifty per cent. At length a new policy was inaugu-

rated. Treaties were made, binding more closely to it the Nashua and Lowell line, and giving it the control of the Lowell branches. The diversion of business was thus arrested, and, under the able management of the present dynasty, the stock has risen above par, and good dividends are returned to the stockholders.

X. *The Boston and Providence Rail-Road.*—This line, 43 miles in length, is coeval also with the Boston and Worcester, and in 1835 came into active operation.

Its original cost was a little less than $1,800,000, and as it occupied an important route both to Providence and New-York, and succeeded to a large business previously conducted by teams and stages, it soon became a successful enterprise and made large dividends to the stockholders. It was distinguished at first for high charges. Its rates for passengers were 4¾ to 5 cents per mile, and its rate for freight was five dollars per ton, or twelve cents per ton a mile. But these high rates and a close and exclusive alliance with a line of steamers running through the Sound, aroused jealousy and opposition.

The Seekonk Branch was built, and a strenuous effort made to break the monopoly, which involved the company in a considerable expenditure. After this the Norwich and Worcester line obtained the State aid, and was pressed through with energy and much popular favor, in consequence of the high charges upon the Boston and Providence line; and when this new line was opened, in 1839, the net income of the Boston and Providence was reduced more than fifty per cent., and in 1840 its net revenue fell from ten to four and a half per cent.

The directors, who had to this point resisted the popular current, were at length obliged to reduce their passenger rates twenty-five per cent., and their freight charges forty per cent.

The effect of these measures was electric. Their warehouses soon overflowed with freight; a large amount of Providence business was soon diverted from New-York to Boston, and the foundation was laid for an active intercourse between Rhode Island and Massachusetts. The rail-road company was compelled to enlarge and rebuild its station-houses, and some gentlemen who had resisted all changes and listened with incredulity to the predictions of the results which occurred, at length commended the wisdom evinced in the new measures adopted.

From 1840 to 1847 the line continued to revive with the rapid growth of business, and in the latter year had again recovered its early prosperity and made large and satisfactory dividends; but success itself is often bewildering.

Large expenditures were made for a costly branch from West Roxbury to Dedham, a point already reached by a branch; an improvement which for a long time gave no adequate return. And further and still larger expenditures were made for a new route from the main track through Pawtucket to Providence, to avoid a ferry; some second track was also laid and costly buildings were erected.

By these measures the cost of construction was suddenly doubled, and the amount carried from $1,800,000 to $3,600,000, without securing any important feeder to the line.

This sudden change gave a severe shock to the company, which for several years found it very difficult to meet its interest, and a six per cent.

dividend, in place of the eight per cent. previously paid; but the gradual growth of business, the substitution of coal for wood and the beneficent hand of time, are again reducing the cost and swelling the dividend. Had the West Roxbury Branch been omitted, and the Providence improvements been gradually effected, no check need have been given to the prosperity of the company. This second lesson will probably need no repetition.

XI. *The Eastern Rail-Road.*—This is another important trunk line, leading from Boston along the eastern coast, through Lynn, Salem and Newburyport to the line of New-Hampshire. It was opened to Ipswich in 1839, and to the State line in November, 1840. Before its construction many of the best appointed stages run between Salem and Boston, and the new line reduced at least one-half both the time of transit and the cost of conveyance.

In selecting the original route it was a serious question whether it was most advisable to make a detour from Salem by Danvers and Charlestown to Boston, thus increasing the expense, adding a few miles to distance, but accommodating a large population and avoiding the ferry, or to adopt the more direct route by East Boston and the ferry. The engineer chose the least expensive and more direct course. The route he chose had certainly many advantages; it was nearly level, free from curvature, crossed few highways at grade, and comported best with the very moderate means of the company. It was connected with Boston proper by a commodious steam ferry.

In the construction of the line a light-edge rail was adopted. At a subsequent period a heavier rail, laid on longitudinal sills, was introduced, but these sills were affected by the frost and were eventually discarded.

The new line was for a series of years well conducted and eminently successful. It commenced with six per cent. dividends, in 1841, and raised them to eight per cent. in 1845, at which rate they were maintained for the seven succeeding years, under the able management of David A. Neal, Esq.

In 1845 the cost of the line, including a branch to Marblehead, was but $2,471,561, represented by—

The capital,.....	$ 1,800,000
State loan, funded at 5 per cent.,.....	500,000
Surplus earnings,.....	125,000
Balance,.....	46,561
	$ 2,471,561

And the net income over expenses and interest was $221,376, or more than twelve per cent. on the capital. And here we are again admonished how great are the dangers of success. Deterioration was then but little felt; the country was prosperous, the prospect of the future brilliant, and the company, in the course of 1846, commenced two branches to Salisbury and Gloucester. By these and other improvements the cost of construction was gradually increased, until, in January, 1852, it had risen to $3,647,000.

Represented by capital,.....	$ 2,850,000
State loan, at 5 per cent.,.....	500,000
Floating debt,.....	297,000

The company was still successful; its net income over expenses had attained to $317,000 in 1850, and it had continued to pay its eight per cent. dividends with great regularity; but new perils were at hand; the dangerous element of a floating debt had grown out of the new branches; rival companies had built a branch from the Boston and Maine line at South Reading to Salem, which made the distance from Boston to Salem twenty miles, against fourteen by the Eastern Rail-Road. Another company had made a branch from the same line to the western side of the city of Lynn.

With its direct and local route and other sources of business, it is safe to say that the Eastern Rail-Road could have put down these feeble rivals by competition at reduced prices; but its managers became alarmed, and fell into the error of buying both at an advance upon their cost, and into the still more serious error of constructing a new and circuitous route from their maine line in Chelsea into the city of Boston, with a view to avoid the ferry, and launched into the heavy expenditures which both these measures required, without any issue of new stock, without any just appreciation of the cost, and with the burthen of a floating debt hanging over them, and money worth more than ordinary interest.

A heavy debt was then created. Notes at one or two per cent. a month were thrown upon the market, and facilities afforded to an unscrupulous treasurer to dispose of funds. The net income was reduced. The principal part of it was absorbed by interest, and the dividends were suspended six years from 1854.

It is difficult to determine from the annual reports the precise cost of the South Reading and Saugus branches, but from January 1, 1852, to January 1, 1853, during which period the branches were purchased, the floating debt was increased $665,906, most of which was probably paid for the branches. And from January 1, 1853, to January 1, 1856, the debt was further increased $1,487,000, nearly all of which must have sprung from the entrance into Boston and the defalcations of the treasurer incident to the floating debt created.

In January, 1856, the account of the company, after its purchases and improvements, stood as follows:

Capital,	$ 2,853,400
Funded and floating debt,	2,949,737
	$ 5,803,137
In place of (in 1852,)	3,647,000

While the debt had thus increased $2,156,137, the net income, which before the purchase and extension was, in 1850, $317,000, had actually fallen, in 1855, to $305,000.

The entire outlay for the branches and extension, made at a period when labor and materials were rising, had thus resulted in a yearly loss of more than the interest paid on the whole outlay; surely a severe lesson.

The stock of this company, under this disaster, fell to 38 per cent., and a part of the burthen has been thrown upon the public, many of whom, on their way from Salem to Boston, have been compelled to make the detour by Saugus, (doubling the Cape or going round the Horn as the seafaring passengers express it,) and paying additional prices for increased detention.

But it is difficult to destroy a rail-road. For six years the directors have devoted income to debt, and have at length reduced the enormous debt nearly one-half. Income has gradually increased, the stock has risen to 72 per cent., the line has earned more than six per cent., and dividends on its capital have been resumed. The sky is not yet, however, entirely clear; the present managers have yet to learn the policy of burnetizing their timber, and of conciliating the public by such moderate prices as were charged in the prosperous days of the road, and running an evening train, to the neglect of which they may ascribe, in a greater or less degree, the new horse railway from Lynn to Boston.

XII. *The Boston and Maine Rail-Road.*—This important line was originally a humble scion or offshoot from the Boston and Lowell Rail-Road. It was a branch of about seven miles, from Wilmington to Andover. It was gradually extended to Haverhill, Exeter, Dover and Berwick, intersecting the Merrimac, Exeter and Cocheco Rivers at their lower waterfalls.

Although the Boston and Lowell line had entered Boston with a direct route and double track, the branch was induced, by some neglect or inattention to its interest, to apply, in 1844, for a separate entrance into Boston, relying upon the heavy toll it would save and the local business it might develop upon an independent track for its indemnity. Its prayer was granted by the State, and a new road, with double track, was at once laid into the heart of Boston, under the direction of JAMES HAYWARD, Esq., the eminent engineer who had been connected with the enterprise from its inception, and directed it until its completion. This is undoubtedly one of the best planned and most successful enterprises in the State. Judiciously located, carefully built, it has well rewarded the talent, experience and good judgment which have been devoted to its construction. Skilfully and liberally managed, it has built up villages along its line, given a great impulse to the city of Lawrence and every village it has touched, and drawn in feeders from every quarter.

It has met with some drawbacks from fires and ambitious shareholders who would have grasped its power and patronage, and ousted those who were the authors of its prosperity, but it has surmounted all these evils and now stands on terra firma.

XIII. *The Fitchburg Rail-Road.*—After the completion of the Boston and Worcester and the Boston and Lowell Rail-Roads the triangle between them remained for ten years unoccupied. The great stage line from Boston to Keene, Troy and Rutland passed through Waltham and Fitchburg, but most of the stages and teams were diverted, and the intervening country was depressed by the influence of the rail-roads to the right and to the left. Unsuccessful appeals were made to the Boston and Worcester direction to send off a branch from Framingham. Urgent requests were also made to the directors of the Boston and Lowell to construct a branch to Fitchburg; but this also proved unavailing, and, in 1842, Col. ALVAH CROCKER, who had made himself familiar with the country when the early surveys for a canal were made by Col. BALDWIN, planned the enterprise of an independent line to Boston. He addressed the people upon the route, called a convention, and took active measures to procure a charter.

The charter was granted in 1842. Very favorable contracts were made for construction, and the iron was purchased in England for the very low price of $22 75 per ton, by a committee of the directors. Although the means of the company were limited, they made liberal provisions for the future. They purchased some fifteen acres of land for freight grounds, fronting upon the harbor, and with tracks leading to deep water piers. They adopted a generous width of five rods in the location, a substantial rail and improved engines and cars, and by adopting a ruling gradient of forty feet, and pursuing the course of several valleys, were enabled to make a surface road, and to touch many important villages.

The road was substantially built in 1844, and the revenue of the ensuing year, about $208,000, confirmed the predictions of the directors, who had estimated it at $200,000.

The entire cost of the line, down to January, 1847, for fifty miles, including stations, equipage and some five miles of second track, was but $1,875,000.

From January, 1845, to 1853 the line enjoyed a high degree of prosperity. Its dividends ran to ten per cent., and its successive issues of stock sold at high premiums, at one period rising to 30 per cent. advance.

Lines radiated from it to Greenfield, Bellows Falls, Burlington, Montreal and Ogdensburg, and its directors, encouraged by the prospect of a growing business, were induced to extend the line across Charles River into Boston, to erect spacious warehouses and an elegant passenger house, to lay down a second track for the entire length of the line, and to avert competition were induced to construct several small branches. Passengers were transported at two to two and a half cents per mile, and a vast business in ice was developed, which was transported five to seven miles at forty cents per ton.

At length, however, the day of trial came for the Fitchburg. The new routes into the interior called for additional and express trains at high rates of speed, and contributed no adequate return either in passengers or low-priced freight; indeed, in some instances they diverted an important traffic in flour and grain from the Fitchburg line.

The second track, although laid down with iron at forty dollars per ton, called for at least fifty thousand dollars annual net income to defray repairs and interest. The express trains required at least an equal amount, and rails, cars and engines, under high speed, demanded a large outlay for renovation. Coincident with this came a rise in labor and materials. Under the combined influence of these causes, the net revenue declined, and became inadequate to meet the customary dividend, and in 1854 the dividends were suspended.

But the Fitchburg Rail-Road, although temporarily depressed, and although its great line of traffic across the Hoosac to Troy still remained unfinished, possessed great inherent vigor and recuperative power, and it had been honestly administered. Express trains have been withdrawn, speed reduced, all debts extinguished by surplus revenue, dividends have been resumed, and its bridges widened for side tracks and stations; a tributary line, twenty-seven miles in length, has been purchased, and paid for out of income, and a lease of $22,000 per annum has been extinguished; a branch to Watertown, once suspended, has been advertised to run; and now the Fitchburg line, with a growing business and vast provision of ground, wharves, stations and tracks for its great pros-

pective business, is frugally and faithfully administered, and stands in a position of strength and security.

Among the remedial measures adopted by the present board was an advance on rates, which were placed low at the inception of the enterprise to invite and attract business. The rise on freight has proved beneficial; the rise on passengers has been less satisfactory, having given some stimulus to horse railways, for the distance of seven miles from Boston; and the managers of the line have found, in several instances, a reduction of rates highly beneficial.

The Fitchburg Rail-Road Company now hold 150 miles of track in the main line and branches, at least three miles of water-front in Boston harbor, and a large surplus fund, costing, altogether, about $3,560,000.

If we exclude terminal stations, dépôt grounds and equipage, the entire cost of its tracks, for superstructure, land, road-bed and construction, will fall below $14,000 per mile.

XIV. *The Old Colony and Fall River Rail-Road.*—The Old Colony Rail-Road, from Boston to Plymouth, (the spot where the Pilgrims landed,) thirty-seven miles in length, was opened in December, 1845. It was not, however, fully completed until the close of the ensuing year, and suffered from having been run at sub-grade. With the exception of a commission paid to the treasurer, nominally for importing the iron, but really for his services in raising the funds, it was, like most of the Massachusetts lines, built with enconomy and fidelity to the interest of the company.

The selection of the route was made by commissioners. They chose the Abington in preference to the Bridgewater route, which was more circuitous, but more productive of freight and better adapted to future extension. The two routes diverge in the town of Braintree, eleven miles from Boston.

The decision in favor of the Abington route led to a petition for a branch from Braintree to Bridgewater, passing through a favorable valley, and accommodating several growing villages. The company opposed this application, and made a short branch from Abington to Bridgewater to counteract it; but the branch was chartered, and has been gradually extended to Fall River, Fair Haven, Wareham and Hyannis.

The adoption of the Abington route and construction of the short branch, followed by the new competing line, impaired the strength of the Old Colony Rail-Road. A floating debt was also thus created, and contracts were soon after made for the lease and equipment of the South Shore and Dorchester and Milton Rail-Roads, at six per cent. upon their cost, which eventually exceeded the estimate by nearly a quarter of a million; and to prevent the entire diversion of the Fall River line, a further contract was made to widen several bridges, lay a second track of eleven miles and erect one or two stations. When the Old Colony Rail-Road Company made these agreements, and increased its expenses, it was earning less than simple interest upon the cost of its line, it was subject to the weight of a large floating debt, and the rate of interest on all the securities it had to offer was verging upon eighteen to twenty-four per cent. per annum.

In this dangerous posture of affairs a new president came into power,

and at once adopted the policy of issuing stock and bonds to meet the danger. By vigorous efforts the required improvements were effected, the timber of the new line was kyanized, the leased roads were equipped and the floating debt extinguished. This was effected in 1847–1848, by the issue of stock and bonds at ninety down to seventy-five per cent., and the safety of the company was thus effectually insured. Immediate measures were taken to develop the revenues of the line, by the adoption of those rates which had been successful upon other routes, and a rapid growth of traffic was effected; but the healing hand of time was required to bring up the income to a height sufficient to make returns upon the additional million necessary to cover discounts, fund the floating debt and complete the contracts; and the new president, upon his retirement in 1850, was obliged to content himself with the consciousness of having performed an unpopular and painful duty, and the approbation of those who could appreciate his exertions. Before he retired, an effort was made to obtain for the company a grant of land on Five Point Channel; but the bill, after passing the committee, was defeated by adverse interests. A union with the Fall River line was also recommended, but the stockholders were not ripe for that important measure. His successors in office toiled on, without marked success, for several years, conducting a losing and costly contest, and disposing of surplus property. This was taken by the company at its start, in exchange for stock, from speculators in the South Cove, who afterwards opposed the grant of other lands from the State. Meanwhile the Fall River line moved on successfully, making regular dividends of eight per cent., while the Old Colony line applied its receipts to the purchase of its stock.

Upon the application of the former for a new and independent route into Boston, an act was passed for the union of the two companies. Three referees were agreed upon; the party selected by the Fall River line, the late John Davis, of Worcester, suddenly died, and the case was heard by the survivors, who, in valuing the stocks, gave to the company earning less than half the per centage on capital earned by the other a premium of about ten per cent. over its successful neighbor, and made an award which is an anomaly in rail-road history.

The Fall River line earned over twenty per cent. in 1852 and 1853; the Old Colony line, in the same two years, earned less than ten per cent., according to the reports under oath to the State.

It has been urged in favor of this award, that the income of the Fall River line was based, in part, on through business with New-York, which was subject to diversion; but it has proved reliable. It has been urged that the track, stations and engines of the Fall River line required repairs; but its surplus income would have soon repaired them, and the engines of the Old Colony line have since required repairs nearly as heavy as those of the Fall River road. It has been urged that the Old Colony line held much real estate; but this was depreciated in value, and, in part, a dead capital, while the Fall River Rail-Road has a cheap and productive surface line. The parties interested, however, preferred peace to war, and acquiesced in the result; the referees pocketed five thousand dollars fees for a few weeks' service, and the union, oppressive as it may have been to the gentlemen of Fall River, has answered all the predictions of its earliest advocates.

The united company has made regular dividends of six per cent., its

surplus revenue has extinguished the bonds, a large overplus has been accumulated for the benefit of the stockholders, who have patiently held the stock, and the road, well-administered in most particulars by its diligent president, is now earning more than ten per cent. upon its capital, although it has lost much of its short travel by high prices and horse railways.

XV. *The Boston and New-York Central Rail-Road.*—The seventh line out of Boston is the Boston and New-York Central Rail-Road, which originated in the Walpole branch, chartered April 16th, A. D. 1846. During the spring of that year seven petitions for rail-roads through Norfolk county came before the legislature. Rail-roads were successful, villages were aspiring, and there was intense solicitude and great rivalry exhibited by the advocates of different routes, and the most eminent counsel were arrayed against each other. The successful parties combined to defeat the bill reported by the committee, and the only line chartered was a branch from Dedham to Walpole.

During this contest a very vivid picture was drawn of the resources of the Blackstone Valley, and the next season, under a very favorable report of the feasibility of the route, which subsequent experience did not justify, the Walpole branch was extended, by charter, to Blackstone, under the name of the Norfolk County Rail-Road. In 1849 this line was opened to Blackstone.

Its managers determined early to make this line a portion of a direct road to New-York, and spared no pains or expense to perfect the road-bed. It was built in the best manner, by able engineers and contractors, and such was the cost that the company was compelled to subject it to a heavy mortgage, and the income from local traffic did not more than suffice to meet the interest upon the debt. The parties who embarked in it were determined that it should still go forward, and another charter was obtained to extend it to the Norwich and Worcester Rail-Road and thence to Southbridge, in 1851, and twenty-two miles from Blackstone to the Norwich and Worcester line were opened for use at the close of 1853, and some expenditures were subsequently made upon the extension to Southbridge.

A new line from Dedham to Boston, called the Midland, was then chartered, and the three lines combined under the title of the Boston and New-York Central Rail-Road Company, December 12th, 1853, and the entire line from Boston, near the foot of Summer-street, to the Norwich and Worcester line, 58 miles, was opened for use early in 1855.

But the means of the company were exhausted, and the struggle ended with the opening of the line; valuable land and important streets had been crossed, a tunnel had been carried under South Boston, below the level of the tide, valuable lots had been engaged for stations and the rails had been laid before the gradation and masonry were finished; inexorable land-owners called for their money, selectmen and commissioners for their bridges, the road itself for repairs. Rival companies were jealous, and threw a shade, not entirely undeserved, over the credit of the company, and in the summer of 1855 the company failed, and the trustees of the Norfolk County bonds entered for foreclosure, and made the middle section a tributary of the Boston and Providence Rail-Road. Various efforts have been made to revive the residue of the line, but

there has been no consentaneous action of the creditors. Every claimant of land damages had a right to enjoin the company not to run until his claim was paid, and the rails of the Boston and New-York Central, like the fowling-piece of Rip Van Winkle, rust while the owners sleep.

The entire cost of this line down to 1855 exceeds $3,750,000. The holders of the Norfolk County bonds, in amount $412,000, alone receive the interest on their debt, although there is little reason to doubt that the road, which, in separate sections, unfinished, has earned $2,000 to $3,000 per mile, would, if finished to Southbridge, pay the interest on one or two millions, and when made a part of a through line to New-York or Albany, as it well may be, would pay the interest on a larger amount.

XVI. *The Western Rail-Road.*—We have now finished our *resumé* of the seven trunk lines out of Boston, and must glance at the great Western Rail-Road, still the principal line of the State. It is a continuation of the Boston and Worcester Rail-Road, for a distance of 155 miles, from Worcester to Greenbush, opposite Albany, with branches to Hudson and North Adams.

This line was commenced in 1836, received loans on mortgage from Massachusetts and the city of Albany to the amount of five millions, and was opened for use at the close of 1842.

The Western Rail-Road on its way to the West encountered very serious obstacles; it crosses the Monadnock range of mountains at a summit one thousand feet above the sea, and the spurs of the Green Mountains, in Berkshire, at an elevation of fourteen hundred and forty feet, and threads the narrow ravine of the Pontoosuc, where it is inscribed into the sides of the mountain, passing from cuts seventy feet deep across the spurs of the mountain on to embankments seventy feet high, and over stone bridges sixty to eighty feet above the stream.

The entire road has cost ten millions of dollars, has established extensive dépôts upon the Hudson, where it receives freight from the canal-boats, and has laid down a second track for a great part of the way.

Its annual revenue is not far from two millions of dollars; it has for years regularly paid eight per cent.; applies a surplus to improvements, and annually accumulates nearly two hundred thousand dollars in sinking funds, which already exceed two millions of dollars.

In its infancy this road had a very severe struggle for existence. At one period its stock fell to 40 per cent., and it became for a time a mere foot-ball for the brokers. Its chief engineer equipped the freight-trains with crab-engines, with cog-wheels and vertical tubes, which proved a very dear purchase, checked the freight business and greatly retarded the prosperity of the road. And yet they were so highly commended at first, that the gentlemen who opposed their purchase and predicted their failure, came near losing their seats in the direction for their opinions. Some of the same gentlemen were opposed because they advocated the present tariff of freight and the fare of $5 and $4 to Albany from Boston, both of which are now understood to be the rates realized on the through tickets. The views of those who have studied deeply, and reflected much, although sometimes denounced as radical, eventually often become the established standard.

The Western Rail-Road, although debarred by its heavy gradients of

seventy to eighty feet per mile, from carrying large masses of flour, grain and other cheap freight at low prices, in competition with the sea route, has carried much valuable freight, has become a great thoroughfare for travellers between Boston, Albany and New-York; built up many villages, transported large quantities of local freight and greatly enhanced the value of estates upon its borders, and the aid furnished by Massachusetts and by Albany has enured to the benefit of both.

XVII. *The Troy and Greenfield Rail-Road.*—The Fitchburg Rail-Road is extended from Fitchburg to Greenfield, a distance of 45 miles by the Vermont and Massachusetts Rail-Road, a line built in the most substantial manner, and which will form an important link in the new line to the Hudson, but which is now gradually paying a debt incurred in construction from its local business. Its gradients from the west are very favorable, none exceeding 45 feet to the mile.

At Greenfield, the Troy and Greenfield line commences, and, pursuing the rich valley of the Deerfield, and touching Shelburne Falls, passing under the Hoosac Mountains and through North Adams, Williamstown and a corner of Vermont, falls into the Troy and Boston Rail-Road at the line of the State of New-York.

By the close of the present year the line from Boston will touch the eastern part of the mountain, and the rail-road from Troy already touches its western base, and nothing will then remain to be done but a horse railway upon the highway over the mountain, to form the connection until the tunnel is finished.

This great work is now making regular advances, and receives the benefit of a loan from Massachusetts, nearly sufficient to pay the laborers; it is regularly advanced as each thousand feet is completed.

The tunnel has already advanced two-thirds of a mile at the eastern end; a shaft has been rapidly sunk half a mile from the western end to the depth of three hundred and twenty-five feet at the grade line, which opens two additional faces to contractors.

The work from the eastern end, to a point some distance west of the shaft, consists of mica slate in vertical layers, which form a regular and sufficient arch and are easily penetrated. No water has thus far been encountered sufficient to retard operations either in the shaft or drifts, although much was *kindly* promised by opposing engineers when a State loan was agitated.

Mechanism, like that employed in the Mount Cenis and Saxony Tunnels, will soon be applied to work the drills with such improvements as the able engineer, Mr. HAUPT, has perfected, which it is believed will double the rate of progress.

And the fact that the shaft just finished has required no pump, and has been worked rapidly and at light expense, will offer strong inducements for the construction of others.

When this great work is achieved, the distance between Boston or Salem, Haverhill, Newburyport, Lawrence or Lowell and Troy, will be reduced between 22 and 30 miles. The summit will be cut down 700 feet; cheap fuel will be furnished, and the tractive power of the engine, compared with those of the Western Rail-Road, will be nearly doubled by a reduction of gradients and diminution of curves.

The Commonwealth is now advancing five dollars per lineal foot on

the rail-road, and fifty dollars per lineal foot upon the tunnel, which will probably insure their completion.

When completed, their effect must be in the diminution of distance, curves, summits, gradients and use of fuel, to reduce at least one-third the cost of transit between Boston and Troy, and to place the seaports of Massachusetts Bay nearly upon a footing with New-York for the exports of western produce to Europe. And if it be the intention of Mr. Wood to secede and take with him the island of Manhattan, let her be assured that the old Peninsula of Shawmut will preserve and improve its union with the West and aspire to be one of its seaports.

XVIII. We might point out the peculiarities and chief points of interest in the history of other lines of Massachusetts.

There is the Connecticut River line, resuming its former dividend after shaking off the incubus of the Ashuelet Lease, against which it was in vain cautioned.

There are the Nashua and Worcester, the Taunton Branch, Taunton and New-Bedford, Cape Cod, Newburyport and other lines earning good dividends by economy and forecast, but time will not suffice to describe them all in our limited space.

A compendious view of the rise, decline and recovery of rail-road property in Massachusetts, and of its present position, may be taken, however, from the following table of the prices of the leading lines of Massachusetts at different periods:

Average Market Value of Rail-Road Stocks during the year 1845, *and their market value in January*, 1857, *and April*, 1861.

Corporations.	*Price*, 1845.	*Price*, *Jan.*, 1857.	*Price*, *April*, 1861.	*Dividend*, *July*, 1861.
Boston and Worcester Rail-Road Co,....	$ 119	.. $ 83	.. $ 113	.. 4 per cent.
Boston and Providence Rail-Road Co,..	111	.. 66	.. 111	.. 4 "
Boston and Lowell Rail-Road Co,.....	120	.. 54	.. 107	.. 3 "
Eastern Rail-Road Company,.....	109	.. 40	.. 72	.. 2 "
Boston and Maine Rail-Road Company,..	112	.. 77	.. 115	.. 3½ "
Fitchburg Rail-Road Company,.....	120	.. 70	.. 102	.. 3 "
Western Rail-Road Company,.....	102	.. 89	.. 116	.. 4 "
Providence and Worcester Rail-Road Co,.	..	.. ..	.. ..	.. 4 "

Our brief *resumé* will have answered its purpose if it has enforced the lessons of experience that forecast, caution, frugality and patience are essential to the success of railways, that neither apathy or recklessness should guide their councils. That floating debts should be avoided. That the wishes and interests of the public must be regarded, and that grave errors are not to be corrected or counteracted by excessive charges; and, above all, that the natural growth of traffic, if countenanced and encouraged by the rail-road itself, will bring prosperity in its train in America as it has done in Europe.

INDUSTRIAL AND COMMERCIAL CITIES.

BALTIMORE.

The leading branches of commerce at Baltimore, for some years, have been flour, grain, tobacco, guano, copper and coffee. From the eleventh annual report of the Baltimore Board of Trade, for the year 1860, we extract the following details:

VALUE OF FOREIGN IMPORTS AND EXPORTS AT THE DISTRICT OF BALTIMORE FOR THE LAST FOURTEEN YEARS.

	Imports.	*Exports.*		*Imports.*	*Exports.*
1847,.....	$4,146,743	$9,826,479	1854,.....	$7,750,387	$11,306,012
1848,.....	5,245,894	7,209,609	1855,.....	7,772,591	11,675,996
1849,.....	5,291,566	8,660,982	1856,.....	10,140,838	13,362,252
1850,.....	6,417,113	8,530,971	1857,.....	11,054,676	11,398,940
1851,.....	7,243,963	6,466,160	1858,.....	7,954,422	10,235,890
1852,.....	5,978,021	7,549,768	1859,.....	10,408,993	8,724,261
1853,.....	6,331,671	9,086,910	1860,.....	10,271,818	10,968,599

The inspections of flour have decreased of late years. In the year 1852 they were 1,307,166 bbls., and in the year 1853 1,183,704 bbls. The export to Brazil was formerly much larger than it is now.

FLOUR INSPECTIONS IN BALTIMORE FOR THE LAST FIVE YEARS.

	1860.	1859.	1858.	1857.	1856.
	bbls.	bbls.	bbls.	bbls.	bbls.
Howard Street,.....	368,647	296,245	246,258	264,471	371,128
City Mills,.....	299,927	356,391	342,437	352,419	386,286
Ohio,.....	165,314	104,571	313,310	208,872	158,425
Family,.....	132,627	106,176	50,046	30,152	24,475
Total,.....	966,515	863,383	952,051	855,914	940,314
Rye,.....	11,476	11,837	9,554	9,141	8,278
Corn Meal,.....	51,215	54,758	58,142	34,943	51,947

COMPARATIVE RECEIPTS OF GRAIN FOR FOUR YEARS.

DESCRIPTIONS.	1857.	1858.	1859.	1860.
	bushels.	bushels.	bushels.	bushels.
Wheat,.....	3,103,498	2,716,731	3,064,000	2,839,977
Corn,.....	4,183,854	4,046,745	3,620,900	3,044,361
Oats,.....	1,200,000	1,115,194	950,476	1,086,750
Rye,.....	160,000	108,378	140,970	101,971
Peas,.....	3,000	7,000	6,400	10,000
Beans,.....	2,000	1,000	3,260	2,500
Total,.....	8,652,352	7,995,048	7,786,000	7,085,559

FLOUR INSPECTIONS AT BALTIMORE, SINCE 1841.

	bbls.		bbls.
1841,.....	628,974	1849,.....	764,519
1842,.....	558,282	1850,.....	896,592
1843,.....	560,431	1851,.....	912,498
1844,.....	499,501	1852,.....	1,307,166
1845,.....	576,745	1853,.....	1,183,704
1846,.....	850,116	1854,.....	837,195
1847,.....	959,456	1855,.....	957,739
1848,.....	736,441	1856,.....	940,314

Tobacco.—The largest export of tobacco from the port of Baltimore, since 1841, was in the year 1860, viz., 67,142 hhds. The following shows the annual export from Baltimore, and from all ports of the United States, from 1841 to 1847:*

	From Baltimore. hhds.	*From other ports.* hhds.	*From United States.* hhds.	*Total value.*
1841,.....	35,482 ..	112,346 ..	147,828 ..	$12,576,703
1842,.....	43,763 ..	114,947 ..	158,710 ..	9,540,755
1843,.....	42,324 ..	52,130 ..	94,454 ..	4,650,979
1844,.....	44,910 ..	118,132 ..	163,042 ..	8,397,255
1845,.....	65,910 ..	81,258 ..	147,168 ..	7,469,819
1846,.....	51,386 ..	96,612 ..	147,998 ..	8,478,270
1847,.....	53,344 ..	82,418 ..	135,762 ..	7,242,086

TOBACCO INSPECTIONS AT BALTIMORE FOR THE LAST TWELVE YEARS.

Years.	*Maryland.*	*Ohio.*	*Kentucky and other kinds.*	*Total hhds.*	Stocks. *Baltimore.*	Stocks. *N. Orl'ns.*
1860,.....	51,000 ..	23,000 ..	3,100 ..	77,503 ..	24,436 ..	13,814
1859,.....	44,480 ..	15,331 ..	3,022 ..	62,801 ..	14,073 ..	19,111
1858,.....	45,200 ..	22,300 ..	3,169 ..	70,669 ..	8,354 ..	20,167
1857,.....	38,057 ..	7,640 ..	1,608 ..	47,305 ..	4,219 ..	5,078
1856,.....	38,330 ..	12,959 ..	1,563 ..	52,852 ..	4,584 ..	10,212
1855,.....	28,470 ..	10,097 ..	991 ..	39,558 ..	7,439 ..	5,034
1854,.....	26,048 ..	10,362 ..	2,560 ..	38,970 ..	3,733 ..	6,577
1853,.....	29,248 ..	17,947 ..	1,472 ..	48,667 ..	9,779 ..	28,250
1852,.....	29,569 ..	17,720 ..	1,043 ..	48,332 ..	11,759 ..	23,510
1851,.....	25,013 ..	16,798 ..	931 ..	42,742 ..	17,699 ..	9,099
1850,.....	27,085 ..	13,965 ..	783 ..	41,833 ..	10,617 ..	11,050
1849,.....	30,689 ..	13,664 ..	1,248 ..	45,601 ..	19,628 ..	5,428
Total,.....	413,189 ..	181,783 ..	21,490 ..	616,833 ..	136,320 ..	167,330
Average,..	34,432 ..	15,148 ..	1,790 ..	51,400 ..	11,360 ..	13,944

EXPORTS OF TOBACCO FROM THE PORT OF BALTIMORE FOR THE LAST THIRTEEN YEARS.

Years.	*Bremen.*	*Rotterdam.*	*Amsterdam.*	*France.*	*All other places.*	*Total hhds.*
1860,.....	24,700 ..	22,700 ..	5,244 ..	6,825 ..	7,677 ..	67,142
1859,.....	19,180 ..	21,735 ..	1,253 ..	8,311 ..	5,495 ..	55,974
1858,.....	16,542 ..	18,059 ..	3,825 ..	16,935 ..	11,173 ..	66,534
1857,.....	18,034 ..	11,711 ..	4,054 ..	7,438 ..	6,325 ..	47,562
1856,.....	20,612 ..	14,215 ..	7,779 ..	4,891 ..	8,301 ..	55,798
1855,.....	9,103 ..	7,510 ..	10 ..	7,527 ..	1,144 ..	36,392
1854,.....	18,016 ..	7,407 ..	5,583 ..	10,180 ..	4,006 ..	45,192
1853,.....	18,947 ..	10,395 ..	9,980 ..	5,380 ..	5,986 ..	50,688
1852,.....	22,860 ..	11,473 ..	5,067 ..	7,679 ..	7,734 ..	54,813
1851,.....	12,654 ..	9,694 ..	4,154 ..	2,327 ..	5,292 ..	34,124
1850,.....	15,864 ..	7,815 ..	5,973 ..	8,177 ..	6,940 ..	44,368
1849,.....	18,821 ..	13,783 ..	8,725 ..	9,562 ..	1,033 ..	51,924
1848,.....	12,787 ..	7,910 ..	3,103 ..	5,761 ..	131 ..	38,890

See MERCHANTS' MAGAZINE, July, 1861, p. 58.

PRICES OF MARYLAND, OHIO AND KENTUCKY TOBACCO ON THE 15TH OF JANUARY, AND ABOUT THE SAME TIME EACH ALTERNATE MONTH, 1860.

MARYLAND.	*Jan.* 16.	*March* 15.	*May* 15.	*July* 15.	*Sept.* 15.	*Nov.* 15.
Inferior to common,...	2 @ 3	2 @ 3	2 @ 3	2 @ 3	2 @ 3	2 @ 3
Good common,.....	3½ @ 4	3½ @ 4	3½ @ 4½	3½ @ 4½	3½ @ 4½	3½ @ 4½
Middling,.....	4½ @ 5½	4½ @ 5½	5 @ 6½	5 @ 6½	5 @ 6½	5 @ 6½
Good to fine brown,...	6 @ 10	6 @ 10	7 @ 9½	7 @ 9½	7 @ 9½	7 @ 9½
Fine brown and colory,	10 @ 13	10 @ 13	9½ @ 12	9½ @ 12	9½ @ 12	9½ @ 12
Ground leaves,.....	3 @ 6	3 @ 6	3 @ 6	3 @ 6	3 @ 6	5½ @ 6
OHIO.						
Inferior to common,...	nominal.	3 @ 4	3 @ 4	3 @ 4	3 @ 4	3 @ 4
Red and spangled,....	nominal.	5 @ 6½	5 @ 6½	5 @ 6½	5 @ 6½	5 @ 6½
Good and fine spangled,	nominal.	7 @ 8	7 @ 8	7 @ 9	7 @ 9	7 @ 9
Good and fine yellow,..	nominal.	9 @ 12	10 @ 12	10 @ 12	10 @ 12	10 @ 12
KENTUCKY.						
Common lugs,.....	nominal.	4¼ @ 4½	4½ @ 5	3 @ 3½	3½ @ 4	4 @ —
Fair to good,.....	nominal.	5 @ 5½	5½ @ 6	4 @ 4½	4½ @ 5	4½ @ 5
Common leaf,.....	nominal.	6 @ 6½	6½ @ 7	5 @ 5½	5½ @ 6	5½ @ 6
Fair leaf,.....	nominal.	7 @ 7½	7½ @ 8	6 @ 7	6½ @ 7½	6½ @ 7½
Good leaf,.....	nominal.	8 @ 8½	8½ @ 9	8 @ 9	7½ @ 8½	7½ @ 8½
Fine to choice,.....	nominal.	9 @ 12½	10 @ 12½	10 @ 12	9 @ 13	9 @ 13

IMPORTS OF GUANO AT BALTIMORE FOR THE LAST TWELVE YEARS.

	Tons.		*Tons.*
1849, Peruvian,.....	2,700	1855, all kinds,.....	43,930
1850, "	6,800	1856, "	38,706
1851, "	25,000	1857, "	28,625
1852, "	25,500	1858, "	28,143
1853, "	32,152	1859, "	63,206
1854, all kinds,.....	58,927	1860, "	71,614

Guano.—The importations at Baltimore the past year have been as follows: of Peruvian, 56,584 tons, (including 2,450 tons coastwise;) Mexican, 5,150 tons; Sombrero, 4,156 tons; Nevassa, 3,830 tons; Jarvis Island, 450 tons; Baker's Island, 830 tons; Elide Island, 390 tons; African, 110 tons; Johnson's Island, 114 tons—in all 71,614 tons, against 63,206 tons in 1859, being the largest supply ever before received at this port. The demand for all descriptions have been good, and prices have ruled steady during the year. During the past month the arrivals of Peruvian have been quite free, and the stock at the close in warehouses is estimated at 18,000 @ 20,000 tons, being double the quantity on hand same time last year.

There is, however, no prospect of any reduction in the price. The recent contracts with the Peruvian government require enormous advances from the contractors. The consumption in Europe is much greater than in this country, and there is a treaty stipulation with England which prohibits a reduction in prices in this country without a corresponding reduction in Europe. It continues to be a well-established fact, that the deposits of guano in the Chincha Islands are inexhaustible, so far as the present generation is concerned. The monopoly is complete, for there is no other guano, except in very limited quantities. The origin of all guano is the same, but this is the only deposit where there is a total absence of rain. At all other localities, the ammonia being soluble, is washed out by rain. Guano continues to be imported from Jarvis and Baker's Islands, in the Pacific. It is only valuable for its phosphates,

and is subject to the cost of high freights. Mexican and Sombrero continue to arrive. The Ichobold from Africa, the West India, the Elide, California and the Columbian have been quite exhausted. The total value of guano at importers' prices the past year is estimated at $3,700,000.

Copper.—The two smelting establishments have been in full operation the past year, producing over 10,000,000 lbs. of ingot copper, that takes the preference in the market, and, of course, is eagerly bought as fast as made. Baltimore is better situated for smelting copper ores than any other place in the country, as there is no coal equal to the Cumberland for it. Ingot copper has ruled very steady the whole year at 21½ @ 23 cents per pound. The quantity exported to foreign ports direct amount to 547,500 lbs., principally to Bremen and Holland.

Iron.—As a general remark, the state of the iron trade for the year has been satisfactory, without any great fluctuations. The demand has been equal to the supply, and most of the furnaces and rolling-mills have had constant employment, although the profits have been small; but by economy and good management (which, after all, is the secret of the success of all branches of manufacturing) it has been sufficiently remunerative to encourage an outlay for an increased business for 1861. The proprietors of one of the large rolling-mills are making arrangements to nearly double the production of their celebrated boiler iron.

IMPORTS OF COFFEE AT BALTIMORE FROM BRAZIL, FOR THE PAST SEVENTEEN YEARS.

Year.	*Bags.*	*Year.*	*Bags.*
1844,	122,837	1854,	200,829
1845,	104,816	1855,	249,060
1846,	162,832	1856,	197,989
1847,	115,261	1857,	203,560
1848,	204,485	1858,	188,019
1849,	186,173	1859,	230,984
1850,	144,492	1860,	181,292
1851,	256,142		
1852,	224,080	Total,	3,153,337
1853,	185,980	Average,	185,190

Coal.—During the past year the aggregate receipts foot up 722,813 tons of all kinds, being an increase of 120,000 tons compared with last year, and equally divided between the bituminous and anthracite. The dealers engaged in this branch of business very generally complain of the high rates of freight imposed by the Baltimore and Ohio Rail-Road, and lead us to infer that with lower rates a largely increased business would be the result.

All the bituminous coal received was brought here *via* the Baltimore and Ohio Rail-Road, but of the anthracite coal brought to our market, 173,850 tons were received *via* the Northern Central Railway, and 151,279 tons *via* the Susquehanna and Tide-Water Canal. Bituminous coal has sold through the year with but little variation at $3 15 for fine, $3 50 for run of mine, and $4 25 per ton for lump, delivered on board at Locust Point; but for anthracite coal prices have ranged at from $4 25 up to $5 25 per ton, the former being the lowest, and the latter the highest price for it during the year.

RECEIPTS OF CUMBERLAND COAL AT BALTIMORE IN 1859 AND 1860.

	1859.		1860.		1859.		1860.
January,	20,204	..	14,404	July,	30,792	..	43,659
February,	16,136	..	16,569	August,	34,993	..	44,291
March,	21,468	..	31,384	September,	30,989	..	30,935
April,	23,563	..	36,607	October,	36,340	..	38,444
May,	40,464	..	47,367	November,	33,962	..	29,932
June,	35,096	..	37,202	December,	24,814	..	26,890
Total,	156,931	..	183,533	Total,	191,890	..	214,151

Total receipts in 1859,.....tons, 351,821
" " 1860,..... " 397,684

Increase in 1860,..... " 45,863

RECEIPTS OF COAL AT BALTIMORE FOR THE PAST TEN YEARS, TO 31ST DECEMBER.

	Bituminous.		*Anthracite.*		*Bituminous.*		*Anthracite.*
1851,	163,855	..	200,000	1856,	446,981	..	266,661
1852,	256,000	..	125,000	1857,	444,603	..	243,482
1853,	406,183	..	183,000	1858,	318,607	..	256,105
1854,	451,070	..	238,740	1859,	351,821	..	268,189
1855,	389,741	..	265,921	1860,	397,684	..	325,129

Oysters.—The oyster-packing business of Baltimore is still fully maintained. There are now engaged in its prosecution about thirty houses, employing a large number of persons of both sexes, in the different departments of shucking, packing, &c. The quantity of oysters used by the trade during a season, viz., from September 1st to June 15th, is about 3,000,000 bushels, averaging 10,000 bushels per day. The latter part of last season was very brisk, but this fall the trade has, in common with all other branches, suffered from the political panic. About two-thirds of the oysters taken by the packers are put up in a raw state in ice, and sent to all the cities in the West. The balance is put up sealed, and also sent in the same direction—St. Louis being the principal point for distributing to the extreme West. The shipments to California and foreign ports is not so great as formerly. There are employed in bringing oysters to this port several hundred vessels, carrying an average of 700 bushels each, with a crew of four persons to each vessel. There are about 2,000 persons of both sexes engaged in shucking, packing, &c., the larger proportion of whom are negroes. There are also about 200 persons employed in soldering the cans, making boxes and packing in ice ready for shipment. Another department of this business is the manufacture of cans, which employs some 200 tinners, at an annual cost of $400,000. We also notice the receipt of 200,000 bushels, of which 30,000 bushels are brought by the Norfolk and other steamers, for city consumption, and averaging 50 cents per bushel. The principal items of the trade we recapitulate as follows:

Number of packing houses,.....30	Vessels employed,.....500
Bushels packed.....3,000,000	Persons employed,.....3,000
Cost, at 35 cts. per bushel,....$1,050,000	Total value of trade,.....$1,800,000

The officers of the Baltimore Board of Trade, elected October 1st, 1860, are as follows:—President, JOHN C. BRUNE; Vice-Presidents, A. SCHUMACHER, THOMAS C. JENKINS, WILLIAM MCKIM, ROBERT LESLIE; Treasurer, E. B. DALLAM; Secretary, GEORGE U. PORTER.

VESSELS ARRIVED AT BALTIMORE DURING THE YEAR 1860, EXCLUSIVE OF BAY CRAFT.

Months.	*Steam'rs.*	*Ships.*	*Barks.*	*Brigs.*	*Schrs.*	*Total 1860.*	*Total 1859.*	*Total 1858.*
Total 1860,....	512 ..	121 ..	190 ..	287 ..	1,310 ..	2,426 ..	2,373 ..	2,387
Total 1859,....	480 ..	115 ..	184 ..	330 ..	1,264 ..	2,373 ..	.... ..	....
Total 1858,....	459 ..	97 ..	173 ..	318 ..	1,340 ..	2,387 ..	.... ..	....
Total 1857,....	436 ..	92 ..	178 ..	324 ..	1,375 ..	2,405 ..	.... ..	....
Total 1856,....	342 ..	96 ..	190 ..	332 ..	1,485 ..	2,444 ..	.... ..	....
Total 1855,....	333 ..	130 ..	221 ..	312 ..	1,246 ..	2,222 ..	.... ..	....

NUMBER AND CLASS OF FOREIGN VESSELS ARRIVED AT BALTIMORE THE PAST YEAR, AND COMPARED WITH THE TWO PREVIOUS YEARS.

Flag.	*Ships.*	*Barks.*	*Brigs.*	*Schrs.*	*Total 1860.*	*Total 1859.*	*Total 1858.*
British,.....	5 ..	15 ..	70 ..	26 ..	116 ..	159 ..	160
Bremen,.....	28 ..	11 ..	1 ..	.. ..	40 ..	28 ..	31
Prussian,.....	4 ..	4 ..	1 ..	.. ..	9 ..	6 ..	5
Oldenburg,.....	.. ..	2 ..	.. ..	.. ..	2 ..	2 ..	2
Hamburg,.....	.. ..	.. ..	.. ..	.. ..	.. ..	1 ..	1
Sicilian,.....	.. ..	.. ..	1 ..	.. ..	1 ..	2 ..	1
Austrian,.....	.. ..	.. ..	.. ..	.. ..	.. ..	2 ..	..
French,.....	.. ..	1 ..	.. ..	.. ..	1 ..	1 ..	..
Brazilian,.....	.. ..	.. ..	.. ..	.. ..	.. ..	1 ..	..
Danish,.....	.. ..	.. ..	3 ..	.. ..	3 ..	.. ..	..
Other Nations,....	.. ..	3 ..	7 ..	.. ..	10 ..	1 ..	4
Total,.....	37 ..	36 ..	83 ..	26 ..	182 ..	203 ..	204

COTTON, FLAX, WOOL AND SILK.

THEIR EARLY HISTORY IN THE UNITED STATES.

I. THE FIRST LEGISLATION IN MASSACHUSETTS IN BEHALF OF DOMESTIC INDUSTRY. II. INTRODUCTION OF THE COTTON GIN. III. THE FIRST EXPORTS OF COTTON FROM THE UNITED STATES. IV. INDIA COTTON AND SILK GOODS. V. THE USE OF FLAX FIFTY YEARS AGO. VI. EFFECTS OF THE EMBARGO AND THE WAR WITH ENGLAND. VII. STEAM NAVIGATION AND RAIL-ROADS. VIII. THE IMPULSE GIVEN TO MANUFACTURES BY THE DISCOVERY OF GOLD IN CALIFORNIA.

THE MERCHANTS' MAGAZINE for May contains some instructive statistics relative to the growth and manufacture of cotton. I propose to add some remarks as to the early operations in this article.

I. In the year 1752, the General Court of the colony of Massachusetts Bay passed an act for the encouragement of industry, and in the year following a spinning-bee was held on Boston Common, and the Boston *Post*, printed in that year, says, five hundred spinning-wheels were there displayed, and the daughters of some of the first families were there engaged in spinning.

The cultivation of cotton in the southern portion of the United States has increased enormously since 1792, when the cotton gin was first used.

II. Some few years since the late Professor OLMSTEAD, of Yale College,

Connecticut, presented me a copy of his memoir of ELI WHITNEY, inventor of the cotton gin. In the memoir, he says:

"ELI WHITNEY was born at Westboro', Worcester County, Massachusetts, December 8, 1765. Mr. WHITNEY left New-Haven, Connecticut, for the State of Georgia, in 1792, for the purpose of undertaking the business of a teacher in a private family in that State; the person who contracted with him disappointed him, and avoided the engagement, and he was left a guest in the family of General GREEN. While under their hospitable roof he discovered a plan for constructing the cotton gin, now extensively used. How wonderful are events; how often the disappointments in one concern pave the way for success in others, which, but for the particular disappointment, might have remained dormant.

"In 1784 an American vessel arrived at Liverpool, England, having on board, for part of her cargo, eight *bags* of cotton, which were seized by the officers of the custom-house, under the conviction that they could not be the growth of America. The following extracts from the old newspapers will exhibit the extent of the cotton trade for the subsequent years:

III. *Cotton from America arrived at Liverpool, England.*

1785, January,	Diana,	from	Charleston,	1	bag.	
February,	Jennings,	"	New-York,	1	"	
June,	Grange,	"	Philadelphia,	3	"	
				—		5
1786, May,	Thomas,	"	Charleston,	2	bags.	
June,	Juno,	"	"	4	"	
				—		6
1787, April,	John,	"	Philadelphia,	6	bags.	
June,	Wilson,	"	New-York,	9	"	
"	Grange,	"	Philadelphia,	9	"	
Aug.,	Henderson,	"	Charleston,	40	"	
Dec.,	John,	"	Philadelphia,	44	"	
				—		108
1788, Jan.,	Mersey,	"	Charleston,	1	bag.	
"	Grange,	"	Philadelphia,	5	"	
June,	John,	"	"	30	"	
July,	Harriet,	"	New-York,	62	"	
"	Grange,	"	Philadelphia,	111	"	
"	Polly,	"	Charleston,	73	"	
				—		282

"The whole domestic exports from the United States in 1825 were valued at $66,940,000, of which value $36,346,000 was in cotton only. In general, this article is equal to some millions more than one-half of our exports. The average growth of the three previous years to 1828 was estimated at 900,000 bales, which is near 300,000,000 lbs., of which one-fifth was consumed in our manufactories."

In the first few years of the present century, and prior to the declaration of war against England in 1812, the common white cotton goods used in New-England were imported from the East Indies, and consisted of long cloths, lawns, emerties, baftas and gurrahs. The fine were jaconet, mull, shear and book muslins, some of which were very superior goods.

IV. Blue, yellow and white nankeens were imported from China, and those called company nankeens were beautiful fabrics.

Bandanna and silk-flag handkerchiefs were imported from India, and those known as company flags and bandannas were of excellent fabric and bright fast colors, and the goods were very durable.

Nankin and Canton crapes for ladies' dresses, crape shawls and scarfs, were also imported from China, and those first imported were of an excellent quality, and the colors bright and good; but importers thought to make the trade more profitable by ordering crapes of a lighter fabric, inferior in quality and at less price, and this system was pursued until these goods became so poor as to become unfashionable and of little value.

V. I was a clerk in a country store in New-England for five years prior to the war of 1812, in which all kinds of goods were usually sold, and there I obtained a particular knowledge, by the daily sales of such goods to customers. At this time flax was raised abundantly in New-England, and farmers exchanged flaxseed and dressed and hackled flax raised on their farms, and the farmers' wives and daughters linen and tow cloth, and linen thread and tow wrapping twine, for store goods. The linen sheetings and shirtings, thread and wrapping twine were made in farmers' houses; then the female portion of the family were accustomed to the labor of spinning, weaving and knitting, and in many families the prosperity of the household was as much owing to the labors in-doors as that of out-doors on the farms.

VI. The embargo and the non-intercourse acts which preceded the declaration of war against England, in 1812, stopped the East India and English trade, and then *factories were first erected in New-England* for the manufacture of cotton and woollen goods. The cotton factories multiplied rapidly, and afforded a home market for the cotton which the embargo, non-intercourse and war had accumulated in the warehouses of the Southern States.

This brief statement, thus chronologically presented, shows an extraordinary progress; and, when the causes and results are compared, are instructive to the meditative as well as the contemplative mind.

VII. Only five years prior to the introduction of the cotton gin the first steamboat made a trip from Burlington, N. J., to Philadelphia, Pa., in fourteen hours, and that steamboat was the invention of a New-Englander, John Fitch, a clock-maker by trade, born at Hartford, Conn. The rail-road followed, and the first I recollect to have seen was that invented by Dr. Calvin Conant, of Brandon, Vt., put in operation on the banks of the River Muskingum, in Ohio, for transporting coal; and after that, in due course of time, came the telegraph wires, an invention by a son of the Rev. Jedediah Morse, of Charlestown, Massachusetts. The progress of change since the termination of the American Revolution has been remarkable.

I will here mention, as an illustration of the effects of change, the cultivation of the potato as an article of food. Potatoes were first used for food subsequent to the settlement of America by white men, and such was the increase, that in the year 1847–48, a failure of the potato crop in Ireland, by reason of the potato rot, the Bank of England, the mammoth money concern of the civilized world, became a borrower of the Bank of France.

VIII. In the month of June, 1848, an humble laborer, while occupied in digging a mill-race for Colonel SUTTER, at Sutter's Fort, first made the discovery of gold in California, and from that time to the present more than six hundred million dollars in value of gold has been received from this section of the continent.

The silks, now so extensively worn in every part of the civilized world are the product of industry—the WORM, an humble insect, produces all the silk.

The recent experiments made in the cottonizing of flax have acquired additional importance from the present disturbed state of the cotton-growing districts of the United States, and these misfortunes may be the means, under Providence, of renewing the cultivation of flax in New-England, so long neglected.

The great export of flaxseed in India evidences that flax is raised in great abundance in that part of the globe. In France the finest cambrics are made of flax, and the richest laces are of that material. The French linen cambrics are beautiful goods.

In the year 1812 it was deemed PATRIOTISM to clothe in *homespun;* and the President of the United States wore a broadcloth suit of clothes, the wool and the fabric of which were from New-England. E. M.

STATISTICS OF MANUFACTURES IN THE UNITED STATES.

THE Superintendent of the census has recently published (under an act of Congress, passed June 12, 1858) an abstract of the statistics of manufactures gathered in the seventh census, (year 1850.) These statistics are for the year ending June 1, 1850, and include the number of establishments, capital, cost of raw material, number of hands employed, cost of labor and value of products of the manufactories in this country.

On the ground of "better late than never" we are glad to see this compilation, although the length of time since the materials were gathered confines its value to comparison with previous statements; for, in the rapid growth of our country, statistics of ten years ago have no value as positive information of the present. We hope the same summary of statistics from the eighth census will be given in time to secure the purpose of present information as well as future reference. It is on the latter ground, and as showing some curious results, that we publish an abstract of the results, for we can hardly suspect the seventh census of giving anything new or particularly accurate. Its compilation was too consistent with "red tape;" and the unavoidable results of having politics mixed with statistics to obtain either of these essential elements of a proper census, are shown in this new document.

The statistics of manufactures show some curious results. We have culled a few of these, but would repeat the caution, that facts and the figures of the census may not always agree. Taking manufactures in their alphabetical order, we find that first, New-York, and secondly, Pennsylvania, have the largest manufactures of agricultural implements, and together manufacture one-third of the total product of nearly seven millions of

dollars. Artificial flowers are manufactured almost entirely in New-York. Ashes come four-fifths from New-York and Ohio. Bagging and cordage are mainly manufactured in Kentucky, New-York and Massachusetts. Bakeries are generally in the order of the trade and population of a State, except in Maryland, which has about 10 per cent. of the total, and ranks fourth, or next to Pennsylvania. The singularity with blacksmiths is in liking California, almost eight per cent. of the total being there, and that State ranking third on the list. Ninety per cent. of the bonnets are made in New-York—Pennsylvania making the balance. Three-fourths of the boots and shoes are from New-England, and one-half from Massachusetts. Breweries and bricks are in New-York and Pennsylvania greatly in excess of their proportionate population. Buttons are over one-half from Connecticut. Calicoes are mainly a product of Rhode Island and Massachusetts. The manufacture of rail-road cars is the first article in which the West makes its appearance as a large manufacturer; Indiana manufactures almost one-eighth of the total. In cement we find that New-York and New-Jersey are the only States showing any considerable production. Charcoal is mainly a New-Jersey product. Chemicals and clothing chiefly come from New-York, Pennsylvania, Massachusetts, Maryland and Ohio. Carriages are made by New-York, Ohio, Connecticut, Pennsylvania and New-Jersey in about equally relative quantities. The number of carriages vary, however, much; Ohio has more than double any other State, but at a less cost for each. Coal is put down almost exclusively to Pennsylvania, erroneously leaving Illinois, Maryland and Ohio out. In copper and brass Connecticut is first. In cotton manufactures Massachusetts has one-third, New-Hampshire one-eighth, Rhode Island, Pennsylvania and New-York one-eleventh, and Connecticut one-sixteenth of the total. Maine and Maryland have each over two millions of dollars; Virginia, New-Jersey and Georgia over one million of dollars in annual production. Cotton and wool mixed are nine-tenths from Pennsylvania. Cutlery, against common belief, is manufactured almost in proportion to the general manufacturing business of each State. Glass is from Pennsylvania first; Massachusetts and New-Jersey next; and New-York fourth. Hardware is from Connecticut and New-York mainly. Hats and caps are from New-York first; then New-Jersey; and Pennsylvania, Connecticut and Massachusetts next. Half of the hosiery is from Pennsylvania. India rubber goods come from Connecticut, New-Jersey and New-York. Rough iron comes from Pennsylvania; the finer manufactures from New-York. Lead is from Wisconsin and Illinois. Lumber is from New-York, Pennsylvania, Maine and Ohio in their order. Millinery is from New-York. Millstones are from Ohio. Castor oil is manufactured four-fifths from Missouri, and hence we suppose the name of the people. Music dwells in New-York according to the census. Nails come mainly from Massachusetts. Lard oil from Ohio. Whale oil nine-tenths from Massachusetts and New-York as commercial centres, and one-tenth from New-Jersey. Paper is first from Massachusetts; then Connecticut and New-York; and fourth from Pennsylvania. Perfumes are two-thirds from Pennsylvania, New-York having only one-sixth of the production. Pork and beef is first from Ohio; then Indiana; then New-York, Kentucky and Missouri equally. Illinois, now high in rank, in 1850 had only three per cent. of the total. Delaware leads in gunpowder, Connecticut second, and New-York and Massachusetts next. New-York has half the printing and book-

selling, and Massachusetts and Pennsylvania one-eighth each. Sails are one-third from Massachusetts. Salt is one-half from New-York. Scales are one-half from Vermont. New-York leads in ship and boat building, Massachusetts, Maine and Maryland following in their order. Stoves are one-third from New-York. Refined sugar one-half from the same State, Missouri, Massachusetts and Pennsylvania ranking each about one-eighth. Tanneries are two-thirds in New-York, Pennsylvania and Massachusetts. Manufactured tobacco is over one-third from Virginia, and one-tenth from New-York, Pennsylvania and Kentucky each. New-Jersey leads in trunks and carpet bags. North Carolina has three-fourths of the turpentine. Pennsylvania is first in wigs and curls, and, with Massachusetts, manufactures three-fourths of the whips. White lead is from New-York. Locksmiths from Pennsylvania. New-York and Massachusetts produce two-thirds of the wire. Two-thirds of the wooden ware come from New-Hampshire and Massachusetts. In woollens we find that Massachusetts has one-third and New-York one-fifth. Generally, New-York is the largest manufacturer, and the cases to the contrary are so rare that we give a list of them:

		Proportion.
Vermont,	Scales,	40 per cent.
Massachusetts,	Bonnets and Straw Hats,	85 "
"	Paper,	25 "
"	Boots and Shoes,	46 "
"	Cottons,	33 "
"	Nails,	30 "
"	Woollens,	25 "
Connecticut,	Guns,	33 "
"	Hardware,	33 "
"	India Rubber Goods,	40 "
Rhode Island,	Calico,	40 "
New-Jersey,	Trunks,	20 "
Pennsylvania,	Coal,	80 "
"	Cotton and Wool, mixed,	95 "
"	Glass,	25 "
"	Hosiery,	50 "
"	Iron,	33 "
"	Perfumes,	90 "
California,	Gold,	90 "
Delaware,	Gunpowder,	25 "
Virginia,	Tobacco,	40 "
North Carolina,	Turpentine,	90 "
Missouri,	Castor Oil,	75 "
Kentucky,	Bagging and Hemp,	30 "
Ohio,	Lard Oil,	60 "
"	Provisions,	30 "
Wisconsin,	Lead,	50 "

The order in which the States rank as manufacturers is New-York, twenty-three per cent.; Massachusetts and Pennsylvania, fifteen per cent.; Connecticut, five per cent.; New-Jersey, four per cent.; Maryland, three per cent.; Virginia, three per cent.; Rhode Island, New-Hampshire, Missouri, Maine and Kentucky, over two per cent. each; Indiana and Illinois, one and a half each; or the fifteen States have eighty-six per cent., leaving to the other twenty-one States and territories only fourteen per cent. of the total manufactures. See the following tables:

GENERAL SUMMARY OF MANUFACTURES IN THE UNITED STATES.

Manufactures.	No. of Establishments.	Capital.	Cost of raw material.	Male hands.	Female hands.	Cost of labor.	Value of product.
Agricultural implements,	1,333	$ 3,564,202	$ 2,445,765	7,211	1	$ 2,167,868	$ 6,842,611
Asheries,	569	485,760	812,190	1,020	4	243,672	1,401,583
Bagging, Rope and Cordage,	417	3,341,506	5,612,247	5,258	799	1,192,788	8,002,893
Bakers,	2,027	3,390,824	8,367,870	6,351	376	1,960,416	13,294,229
Blacksmiths,	10,873	5,884,149	5,111,388	24,983	19	6,508,032	16,048,536
Bonnets, Straw Braid, &c.,	68	336,350	982,674	303	3,408	592,824	1,687,248
Bookbinders & Blank Books,	235	1,063,700	1,560,330	1,778	1,690	901,404	3,225,678
Boots and Shoes,	11,305	12,924,919	23,848,374	72,305	32,949	21,622,608	53,967,408
Boxes, packing,	206	355,156	500,470	878	13	286,500	1,053,741
Brass Foundries,	148	1,585,090	2,112,592	1,666	12	591,672	3,625,618
Breweries,	431	4,072,380	3,055,266	2,386	11	654,144	5,728,568
Bricks,	1,603	4,367,912	1,474,023	16,726	619	4,235,088	6,610,731
Britannia and Plated Ware,	91	592,150	760,978	1,120	156	414,140	1,585,765
Brushes,	146	710,800	638,359	1,500	905	533,460	1,573,579
Cabinet Ware,	4,242	7,303,356	6,089,546	20,997	1,013	6,638,568	17,663,054
Calico Printers,	42	3,922,800	10,462,044	3,351	729	1,088,904	13,680,805
Carpenters and Builders,	2,790	3,289,308	7,011,930	15,276	6	5,599,320	16,886,819
Carpets,	116	3,852,981	3,075,592	3,881	2,305	1,246,560	5,402,634
Cars, rail-road,	41	896,015	1,393,676	1,554	..	664,708	2,498,558
Chandlers,	487	4,145,400	7,006,767	2,660	156	775,300	10,199,780
Chemicals,	170	2,335,715	3,235,380	1,335	54	422,560	4,979,630
Clocks,	23	490,800	456,884	777	23	278,508	1,281,500
Clothiers and Tailors,	4,278	12,509,161	25,780,258	35,051	61,500	15,082,340	48,311,709
Coaches and Carriages,	1,822	4,973,707	3,955,689	13,982	58	4,268,904	11,073,630
Coal mining,	510	8,317,501	246,414	15,112	6	4,069,188	7,173,750
Coffee and Spice,	48	438,662	843,254	305	12	99,900	1,240,614
Combs,	151	633,637	843,482	1,426	362	494,196	1,615,850
Confectioners,	383	1,035,551	1,691,824	1,388	345	458,904	3,040,671
Coopers,	2,902	2,383,040	2,644,582	11,900	16	3,201,204	7,126,317
Copper and Brass,	175	2,850,981	3,062,661	2,388	2	856,044	4,942,901
Cottons,	1,074	76,032,578	37,778,064	35,295	62,661	17,267,112	65,501,687
Cottons & Woollens (mixed,)	103	1,711,720	2,321,986	2,667	1,901	808,752	3,693,731
Cutlery and Edge Tools,	401	2,321,895	1,439,462	4,247	28	1,420,844	3,813,241
Distilleries,	968	5,409,334	10,543,201	3,985	23	1,089,864	15,770,240
Dyers,	46	331,950	754,379	434	26	127,320	1,086,795
Fisheries,	1,407	8,962,403	71,517	20,814	424	4,639,188	10,056,163
Flour and Grist Mills,	11,891	54,415,551	113,036,698	23,260	50	5,680,164	186,056,736
Furriers,	49	1,116,800	643,170	643	430	248,724	1,598,695
Gas,	30	6,674,000	503,074	950	2	390,684	1,921,746
Glass,	94	3,402,350	1,556,883	5,571	97	2,094,576	4,641,676
Gold Mining,	1,015	1,814,012	57,711	4,804	80	3,639,832	9,551,853
Guns,	317	577,509	269,673	1,547	..	518,292	1,173,014
Hardware,	340	3,539,025	3,015,688	6,149	881	1,973,904	6,957,770
Hats and Caps,	1,048	4,427,798	7,100,028	6,974	8,226	3,179,700	14,319,864
Hosiery,	85	544,735	415,113	885	1,490	360,336	1,028,102
India Rubber Goods,	34	1,455,700	1,608,728	1,010	1,558	537,828	3,024,335
Iron Forges,	375	8,517,011	5,338,505	7,698	77	2,310,760	9,002,705
Iron Foundries,	1,319	14,722,749	8,534,024	18,928	31	6,279,912	20,111,517
Iron Furnaces,	404	16,648,360	7,538,118	20,847	207	5,011,300	13,491,898
Iron Manufactures,	99	603,800	596,864	1,079	3	409,728	1,425,343
Iron Mining,	197	923,775	63,651	2,192	3	590,866	1,217,808
Iron Rolling,	64	5,214,700	4,353,150	3,800	20	1,451,748	6,936,081
Lamps,	26	486,300	490,862	918	20	290,424	1,060,022
Lead,	156	603,196	1,532,585	737	16	181,756	2,150,068
Lime,	761	1,124,072	1,106,775	2,894	4	735,746	2,286,242

GENERAL SUMMARY OF MANUFACTURES IN THE UNITED STATES.—(*Continued.*)

MANUFACTURES.	*No. of Establishments.*	*Capital.*	*Cost of raw material.*	*Male hands.*	*Female hands.*	*Cost of labor.*	*Value of product.*
Look. glass & picture frames,	108	$ 445,240	$ 544,980	884	79	$ 347,976	$ 1,252,746
Lumber, sawing and planing,	17,895	40,038,427	27,593,529	51,766	452	18,022,052	58,520,966
Machinists and Millwrights,..	1,062	19,225,918	11,367,728	27,834	58	9,689,912	27,998,344
Medicines, Drugs & D. Stuffs,	143	1,427,375	1,657,886	693	134	276,488	3,508,465
Milliners,	582	660,193	1,496,866	181	3,688	610,886	2,761,989
Morocco Dressers,	116	1,387,750	2,286,995	1,796	171	623,772	3,861,895
Musical Instruments,	204	1,545,935	698,168	2,307	24	1,054,728	2,580,715
Nails,	87	4,428,498	4,438,976	5,227	4	1,812,972	7,662,144
Oil, Lard,	41	362,950	1,271,602	182	11	58,956	1,617,669
Oil, Linseed,	168	896,650	1,477,645	477	2	143,664	1,948,934
Oil, Whale,	50	2,791,000	6,492,876	492	52	198,468	7,839,980
Oil Cloths,	56	640,700	829,706	648	2	178,854	1,256,994
Paper,	443	7,260,864	5,555,929	3,885	2,950	1,497,792	10,187,177
Patent Leather,	20	592,100	886,495	687	150	262,248	1,868,800
Plumbers,	124	646,225	1,297,119	1,037	3	377,944	2,343,607
Pork and Beef Packing,	185	3,482,500	9,451,096	3,267	9	1,231,536	11,981,642
Potteries,	484	777,544	275,083	2,246	43	607,418	1,466,063
Powder, Gun,	54	1,179,225	860,997	576	3	192,588	1,590,332
Printers and Publishers,	673	5,862,715	4,964,225	6,989	1,279	2,737,308	11,586,549
Rice Mills,	4	210,000	1,209,000	200	..	30,400	1,462,000
Saddles and Harness,	3,515	3,969,379	4,427,006	12,598	360	3,154,008	9,935,474
Sails,	183	266,380	880,414	838	10	349,644	1,654,508
Salt and Salt Refining,	340	2,640,860	1,051,419	2,699	87	753,360	2,177,945
Sash and Blinds,	433	1,066,353	859,827	2,448	49	840,924	2,277,061
Sewing Silk,	27	428,350	848,945	295	554	152,712	1,209,426
Silversmiths, Jewelers, &c.,	583	3,828,170	4,920,619	4,873	389	2,131,296	9,401,765
Ship Building and Boats,	892	5,182,309	7,286,401	12,623	6	5,922,576	16,595,683
Starch,	146	692,675	799,459	686	8	193,224	1,261,468
Stone and Marble Quarries,	1,144	4,032,182	2,475,760	9,996	5	3,431,194	8,180,115
Stoves and Ranges,	230	3,179,475	2,913,943	4,227	..	1,617,274	6,124,748
Sugar Refiners,	23	2,669,000	7,662,685	1,644	12	604,248	9,898,800
Tanners and Curriers,	6,528	20,602,945	22,865,253	22,451	124	5,606,110	37,702,333
Tin and Sheet Iron Works,	2,280	4,129,587	4,805,389	7,365	28	2,363,100	8,933,188
Tobacconists,	1,418	5,008,295	7,341,728	12,261	1,975	2,420,208	13,491,147
Trunks and Carpet Bags,	116	356,660	765,816	1,056	264	386,160	1,558,388
Turners,	440	663,615	407,043	1,624	27	493,020	1,374,449
Turpentine,	856	1,663,692	1,484,318	3,369	68	447,348	2,855,657
Umbrellas,	80	761,760	1,399,607	814	1,762	433,548	2,505,622
Upholsterers,	155	565,635	983,961	804	708	365,580	1,790,683
Wheelwrights,	4,226	3,146,211	1,886,551	11,542	7	3,157,544	6,827,451
White Lead,	51	3,124,800	3,541,072	1,508	..	512,388	5,242,213
Wire and Wire Workers,	88	537,725	534,548	658	18	208,128	1,033,249
Wooden Ware,	197	530,165	436,676	1,328	32	372,132	1,138,078
Wool Carders,	630	739,925	1,251,550	1,071	22	225,972	1,739,476
Woollens, carding & fulling,	1,817	26,071,542	24,912,455	29,919	14,976	7,167,900	39,848,557
Miscellaneous,	564	4,045,370	3,249,944	4,247	742	2,231,378	10,050,504

All manufactures producing less than one million of dollars annually, are omitted. It will be seen by the foregoing table, that there is only one manufacturing interest producing over one hundred millions of dollars; of the second class, producing over fifty millions of dollars, and less than one hundred millions, there are three; of the third class, producing between twenty-five and fifty millions of dollars, there are four; of the fourth class, between ten and twenty-five millions of dollars, there are eighteen kinds; of the fifth class, producing between five and ten millions of dollars, there are twenty-one kinds; of the sixth class, producing between one million and five millions of dollars, there are fifty-four kinds.

CONDENSED TABULAR STATEMENT OF THE AGGREGATES OF MANUFACTURES IN EACH STATE AND TERRITORY.

States and Territories.	*No. of Establishments.*	*Capital.*	*Cost of raw material.*	*Male hands.*	*Female hands.*	*Cost of labor per annum.*	*Value of product.*
Alabama,	1,026	$ 3,450,606	$ 2,224,960	4,397	589	$ 1,105,894	$ 4,528,876
Arkansas,	261	305,015	215,789	812	30	159,876	587,908
California,	1,008	1,006,197	1,201,154	3,964	..	3,717,180	12,862,529
Connecticut,	3,737	25,876,648	28,608,971	34,248	16,488	12,485,984	47,114,585
Delaware,	531	2,978,945	2,864,607	3,237	651	936,924	4,649,296
Dist. of Columbia,	408	1,001,575	1,405,871	2,084	536	757,584	2,690,258
Florida,	108	547,060	220,611	876	115	199,452	668,885
Georgia,	1,522	5,456,488	3,404,917	6,650	1,718	1,709,664	7,082,075
Illinois,	3,162	6,217,765	8,959,827	11,066	493	3,204,836	16,534,272
Indiana,	4,392	7,750,402	10,869,700	13,748	692	3,728,844	18,725,428
Iowa,	522	1,292,875	2,356,881	1,687	20	473,016	3,551,783
Kentucky,	3,609	11,810,462	12,165,075	19,576	1,900	5,106,048	21,710,212
Louisiana,	1,008	5,082,424	2,459,508	5,458	759	2,083,928	6,779,417
Maine,	3,974	14,699,152	13,553,144	21,853	6,167	7,485,588	24,661,057
Maryland,	3,725	14,934,450	17,690,836	22,729	7,488	7,403,832	33,043,892
Massachusetts,	8,852	83,940,292	85,856,771	107,784	69,677	41,954,736	157,743,994
Michigan,	2,083	6,563,660	6,136,328	8,990	354	2,717,124	11,169,002
Mississippi,	947	1,615,820	1,375,771	3,046	108	771,528	2,912,068
Missouri,	2,928	8,576,607	12,798,351	14,880	928	4,692,648	24,824,418
New-Hampshire,	3,211	18,242,114	12,745,466	14,103	12,989	6,123,876	23,164,503
New-Jersey,	4,207	22,293,258	22,011,871	29,063	8,762	9,364,740	39,851,256
New-York,	23,553	99,204,405	134,655,674	147,737	51,612	49,131,000	237,597,249
North Carolina,	2,663	7,456,860	4,602,501	12,473	2,128	2,383,456	9,111,050
Ohio,	10,622	29,019,588	34,678,019	47,054	4,437	13,467,156	62,692,279
Pennsylvania,	21,605	94,473,810	87,206,377	124,688	22,078	37,163,232	155,044,910
Rhode Island,	864	12,935,676	13,186,703	12,923	8,044	5,047,080	22,117,688
South Carolina,	1,430	6,058,265	2,787,584	5,992	1,074	1,127,712	7,045,477
Tennessee,	2,887	6,527,729	5,166,886	11,080	959	2,247,492	9,725,606
Texas,	309	539,290	394,642	1,042	24	322,368	1,168,588
Vermont,	1,849	5,001,877	4,172,552	6,894	1,551	2,202,348	8,570,920
Virginia,	4,740	18,109,143	18,101,131	25,790	3,320	5,434,476	29,602,507
Wisconsin,	1,262	3,382,148	5,414,931	5,798	291	1,712,496	9,293,068
Minnesota,	5	94,000	24,300	63	..	18,540	56,800
New-Mexico,	23	68,300	110,220	81	..	20,772	249,010
Oregon,	52	843,600	809,560	285	..	388,620	2,226,640
Utah,	14	44,400	337,381	51	..	9,984	291,220
Aggregate,	123,025	$ 533,245,851	$ 555,123,822	781,137	225,922	$ 236,755,464	$ 1,019,106,616

RATES OF TOLL ON THE NEW-YORK CANALS, 1861.

Established by the Canal Board, on persons and property transported on the New-York State Canals, to take effect on the opening of Navigation.

Toll is to be computed upon the weight ("1,000 pounds per mile") of all articles contained in the following list, unless otherwise stated, opposite to the article excepted:

	cts.	m.	fr.
Articles not enumerated going towards tide water,	0	2	5
Agricultural productions of the United States, not particularly specified,	0	2	5
Apples,	0	2	0
Ashes, pot and pearl,	0	2	0
Ashes, leached,	0	0	5
Bacon,	0	1	0
Barley,	0	3	0
Barrels, empty, transported in boats,	0	1	0
Barrels, empty, transported in rafts,	0	5	0
Bars of iron,	0	2	0
Barytes,	0	3	0
Beans,	0	2	5
Bed plates for steam engines, (cast iron,)	0	2	0
Bedstead stuff, (see *Lumber, No.* 3,)	0	2	0
Beef, salted,	0	2	0
Bloom iron,	0	2	0
Boat knees, (see *Lumber, No.* 3,)	0	2	0
Boats propelled by steam, having preference at the locks over other boats, per mile,	4	0	0
Boats in tow of such steamboat, not exceeding four, and having such preference, per mile,	4	0	0
Boats not propelled by steam, or in tow, and having such preference, per mile,	4	0	0
Boats *used chiefly* for the transportation of passengers upon *all canals*, per mile,	4	0	0
On the same, if they elect to commute for tolls upon passengers,	3	0	0
Boats *used chiefly* for the transportation of property, per mile,	2	0	0
On the same, if they elect to commute for tolls upon passengers,	2	3	0
Bolts, staves, if carried in boats,	0	1	5
Bolts, staves, if carried in rafts,	0	5	0
Bones for manure,	0	1	0
Bones other than for manure,	0	2	0
Boxes, stuff for, (see *Lumber, No.* 3,)	0	2	0
Bran,	0	2	0
Brick,	0	1	0
Broom handles, (see *Lumber, No.* 3,)	0	2	0
Brush backs, (see *Lumber, No.* 3,)	0	2	0
Brush handles, (see *Lumber, No.* 3,)	0	2	0
Buffalo skins,	0	5	0
Butter,	0	2	0
Butts, stave, if carried in boats,	0	1	5
Butts, stave, if carried in rafts,	0	5	0
Cabinet ware,	0	4	0
Carts,	0	4	0
Car axles,	0	3	0
Car wheels, (iron,)	0	3	0
Carriages and sleighs,	0	4	0
Casks, empty, transported in boats,	0	1	0
Casks, empty, transported in rafts,	0	5	0

	cts.	m.	fr.
Castings, all iron castings, except machines and the parts thereof,	0	3	0
Castings, broken,	0	2	0
Cattle, live,	0	2	0
Cedar posts, (see *Lumber, No.* 2,) per 1,000 feet, per mile,	0	5	6
Cedar, red, (see *Lumber, No.* 2,) per 1,000 feet, per mile,	0	5	6
Cement, fire-proof,	0.	2	0
Cement, hydraulic,	0	2	0
Chairs, new,	0	4	0
Chair stuff, (see *Lumber, No.* 3,)	0	2	0
Charcoal,	0	0	5
Cheese,	0	2	0
Clay,	0	1	0
Clover seed,	0	4	0
Coal, mineral,	0	1	0
Coal, bituminous, going towards and carried to tide-water,	0	0	5
Coal oil,	0	1	0
Coffee,	0	2	0
Copper ore,	0	0	5
Copper, pig and smelted,	0	1	0
Corn,	0	2	5
Corn meal,	0	2	5
Cotton,	0	1	0
Crockery,	0	2	0
Deer skins,	0	5	0
Demijohns,	0	4	0
Domestic distilled spirits,	0	2	0
Domestic cottons,	0	2	0
Domestic woollens,	0	2	0
Dried fruit,	0	4	0
Drilled barrows,	0	4	0
Earth,	0	1	0
Esculent roots,	0	1	0
Enamelled ware, flint,	0	2	0
Fanning mills,	0	4	0
Felloes, (see *Lumber, No.* 3,)	0	2	0
Fire-proof cement,	0	2	0
Fire brick,	0	1	0
Flax seed,	0	2	0
Flint enamelled ware,	0	2	0
Flour,	0	2	5
Furniture, new; cabinet ware, chairs, looking-glasses, willow-ware, mattresses and piano-fortes,	0	4	0
Furniture for stoves, not cast iron,	0	6	0
Furs, and skins of animals producing furs,	1	0	0
Gas pipes,	0	2	0
Glass ware,	0	2	0
Grass seed,	0	4	0
Grease,	0	1	5
Gun stocks, (see *Lumber, No.* 3,)	0	2	0
Gypsum, the product of this State,	0	1	0
Gypsum, foreign and product of other States,	0	3	0
Handspikes, (see *Lumber, No.* 3,)	0	2	0
Harrows,	0	4	0
Hay, pressed,	0	1	0
Heading, undressed, transported in boats,	0	1	0
Heading, dressed or partly dressed,	0	1	5
Heading, transported in rafts,	0	5	0
Hemp, going towards tide-water,	0	1	0
Hides, green, of domestic animals of the United States,	0	3	0
Hides, raw, imported, of domestic and other animals,	0	3	0

	cts.	m.	fr.
Hogs, live,	0	2	0
Hops,	0	2	0
Hop poles, (see *Lumber, No.* 3,)	0	2	0
Hoop poles, (see *Lumber, No.* 3,)	0	2	0
Horses,	0	3	0
Horses, used exclusively for towing boats and other floats, exempt from toll.			
Horse shoes,	0	2	0
Hubs, (see *Lumber No.* 3,)	0	2	0
Hydraulic cement,	0	2	0
Ice,	0	1	0
Iron in sheets, bars or bundles,	0	2	0
Iron ore,	0	1	0
Iron, bloom, scrap and pig,	0	2	0
Iron, boiler,	0	2	0
Iron, bridge and railing,	0	2	0
Iron bolts,	0	2	0
Iron safes,	0	2	0
Junk,	0	3	0
Lard,	0	1	5
Lard oil,	0	1	5
Lath, (see *Lumber, No.* 1,)	0	2	0
Lath, (see *Lumber, No.* 2,) per 1,000 feet per mile, surface measure,	0	5	6
Lath, (see *Lumber, No.* 3,)	0	2	0
Lead, pig, going towards tide-water,	0	0	5
Lead, bar, going towards tide-water,	0	0	5
Leather, manufactured,	0	2	0
Lime, manufactured,	0	1	5
Lime water,	0	1	5
Limestone,	0	1	0
Looking glasses,	0	4	0
Looking glass backs, (see *Lumber, No.* 3,)	0	2	0
LUMBER, No. 1.			
Transported in boats by weight, per 1,000 *pounds per mile:*			
White pine, white wood, cherry, bass wood, cedar, boards, planks, scantling, and on all sidings, lath and other sawed stuff, less than one inch thick, (except such as is enumerated in *Lumber, No.* 3,)	0	2	0
Oak, hickory, beech, sycamore, black walnut, butternut, maple, ash, fir, elm, tamarack, yew and spruce,	0	1	5
Hemlock,	0	0	6
LUMBER, No. 2.			
Transported in boats by measurement, per 1,000 *feet per mile:*			
Boards, planks, scantling and sawed timber, reduced to inch measurement, and all siding, lath and other sawed stuff, less than one inch thick, (except such as enumerated in *Lumber, No.* 3,) tolls computed on surface measurement, and all kinds of red cedar, cedar posts, estimating that a cord, after deducting for openings, will contain 1,000 feet,	0	5	6
Hemlock, per 1,000 feet per mile, when not weighed,	0	2	5
Lumber, No. 2, transported in rafts, per 1,000 feet per mile,	2	5	0
LUMBER, No. 3.			
Transported in boats by weight, per 1,000 *pounds per mile:*			
Sawed lath of less than ten feet in length, split lath, hoop poles, hand spikes, rowing oars, broom handles, spokes, hubs, tree nails, felloes, boat knees, plane stocks, pickets for fences, stuff—manufactured or partly manufactured—for boxes, chairs and bedsteads, hop poles, brush handles, brush backs, looking-glass backs, gun stocks, plow beams and plow handles,	0	2	0
Sawed stuff for window blinds, not exceeding one-fourth of an inch in thickness, and window sashes and blinds,	0	6	0

	cts.	m.	fr.
Lumber shall not be cleared by measurement when carried in a boat having other articles on board paying toll by *weight;* but such lumber shall, in all cases, be also cleared by weight.			
When a cargo is composed entirely of lumber, which can be cleared by weight or measure, the whole of such cargo shall be cleared by measurement or by weight, as the shipper or master may elect; and in no case shall a portion of any such cargo be cleared by measurement and the other portion by weight.			
Mahogany, (except veneering,) reduced to inch measure, per 1,000 feet per mile,	1	5	0
Manure,	0	1	0
Mattresses,	0	2	0
Mechanics' tools. (See *Tools.*)			
Merchandise, non-enumerated,	0	2	0
Molasses,	0	2	0
Moose skins,	0	5	0
Mowing machines,	0	4	0
Nails,	0	2	0
Oats,	0	2	5
Oil cake,	0	2	0
Oil meal,	0	2	0
Onions,	0	1	0
Passengers, over ten years of age, per mile,	0	0	5
Peas,	0	2	5
Piano-fortes,	0	4	0
Pickets for fences, (see *Lumber, No.* 3,)	0	2	0
Pig copper,	0	1	0
Pig iron,	0	2	0
Plane stocks, (see *Lumber, No.* 3,)	0	2	0
Plaster, calcined,	0	2	0
Plow beams, (see *Lumber, No.* 3,)	0	2	0
Plow castings,	0	2	0
Plow handles, (see *Lumber, No.* 3,)	0	2	0
Plows,	0	4	0
Pork, salted,	0	2	0
Potatoes,	0	2	0
Powder and gunpowder,	0	4	0
Rags,	0	2	0
Rail-road chairs,	0	2	0
Rail-road iron,	0	2	0
Rails for fences, nor exceeding fourteen feet in length, carried in boats, per M. per mile,	2	0	0
On the same, if carried in rafts, per M. per mile,	8	0	0
Reaping machines,	0	4	0
Roots, esculent,	0	1	0
Rowing oars, (see *Lumber, No.* 3,)	0	2	0
Rye,	0	2	5
Salt, foreign,	0	5	0
Salt manufactured in this State,	0	1	0
Sand,	0	1	0
Sawed stuff. (See *Lumber, Nos.* 2 *and* 3.)			
Sawdust,	0	1	0
Scrap iron,	0	2	0
Sheep, live,	0	2	0
Shingles, in boats, per 1,000 pounds, per mile,	0	1	5
Shingles, in boats, per M. per mile,	0	0	5
Shingles, per M., per mile, in rafts,	0	4	0
Ship knees,	0	1	0
Ship knees, transported in rafts,	0	5	0

	cts.	m.	fr.
Ship stuffs,	0	2	0
Shooks, stave,	0	1	5
Shrubbery and trees,	0	4	0
Siding, (see *Lumber No.* 1,)	0	2	0
Siding, (see *Lumber No.* 2,) per 1,000 feet, surface measure,	0	5	6
Skins of animals producing furs,	1	0	0
Slate,	0	1	0
Sleighs,	0	4	0
Soda ash,	0	1	0
Spikes,	0	2	0
Split posts, not exceeding ten feet in length, carried in boats, per M. per mile,	2	0	0
On the same, if carried in rafts, per M. per mile,	8	0	0
Spokes, (see *Lumber, No.* 3,)	0	2	0
Staves, cut, dressed or partly dressed, and stave bolts and butts, transported in boats,	0	1	5
Staves, undressed,	0	1	0
Stave and stave bolts and butts, transported in rafts,	0	5	0
Steel,	0	2	0
Stone for the manufacture of lime,	0	1	0
Stone, wrought,	0	1	5
Stone, unwrought and partly wrought,	0	1	0
Stove furniture, not cast iron,	0	6	0
Stove pipe,	0	6	0
Stoves,	0	3	0
Straw, pressed,	0	1	0
Sugar,	0	2	0
Tallow,	0	1	5
Tan bark, per cord, per mile, carried in boats,	0	5	0
Tan bark, per cord, per mile, carried in rafts,	2	0	0
Tan bark, ground, per 1,000 pounds, per mile,	0	2	5
Tar,	0	2	0
Threshing machines,	0	4	0
Tile for roofing,	0	4	0
TIMBER, per 100 cubic feet, per mile, transported in boats:			
Squared and round,	0	6	0
Squared and round, transported in rafts,	1	0	0
On the same, if cleared after the first of June, and arriving at tide-water before the 15th of August, inclusive, per 100 cubic feet, per mile,	0	7	0
Sawed timber, (see *Lumber, No.* 2,) per 1,000 feet per mile,	0	5	6
Tobacco, unmanufactured, going towards tide-water,	0	1	0
Tobacco, going from tide-water,	0	2	0
Tools, mechanics',	0	2	0
Treenails, (see *Lumber, No.* 3,)	0	2	0
Trees and shrubbery,	0	4	0
Turnips,	0	1	0
Turpentine,	0	2	0
Varnish,	0	2	0
Wagons,	0	4	0
Ware, flint,	0	2	0
Water, lime,	0	1	5
Water pipes,	0	2	0
Wheat,	0	2	5
Willow ware,	0	4	0
Window blinds, and sawed stuff for, (see *Lumber, No.* 3,)	0	6	0
Window sashes,	0	6	0
Wood for fuel, per cord, per mile,	0	5	0
Wood for fuel, per cord, per mile, carried in rafts,	2	0	0
Wood used in the manufacture of salt, exempt from toll.			
Wool,	0	2	0

COMPARATIVE PRICES OF LEADING ARTICLES IN THE NEW-YORK MARKET,

ON THE 1ST OF MAY, IN EACH YEAR, FROM 1849 TO 1861.—*(From the New-York Journal of Commerce.)*

ARTICLES.	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.
Breadstuffs—													
Wheat flour, State,.....bbl.	$4 81	$5 25	$4 31	$4 18	$4 62	$7 62½	$9 81½	$5 50	$6 00	$4 25	$5 50	$5 50	$5 20
Rye flour, fine,..... "	2 81	2 87	3 50	3 31	3 81	4 75	6 75	3 25	3 50	3 40	3 75	3 50	3 10
Corn meal, Jersey,..... "	2 75	2 81	3 12	3 25	3 00	3 75	5 25	3 12½	3 25	3 50	3 90	3 80	2 85
Wheat, prime white,...bush.	1 25	1 33	1 14	1 11	1 28	2 31	2 80	1 80	1 85	1 35	1 70	1 65	1 65
Rye,..... "	57	59	73	77	90	1 12	1 50	78	90	66	84	84	68
Oats, State,..... "	36	41	45	39	46	56	81	40	58	46	54	43	36
Corn, yellow,..... "	59	61	64	64	67	85	1 13	62	80	73	86	82	67
Candles—													
Mould,.....lb.	11½	12	12	13	12	16	14½	14	14	10½	20½	17	17
Sperm,..... "	34	42	43	40	32	30	29	40	42	39	40	38	32
Coal—Anthracite,.....ton,	5 50	5 50	5 00	5 50	5 00	6 00	6 00	5 50	5 25	4 25	5 00	5 00	4 75
Coffee—													
Brazil,..... .....lb.	6½	8¾	9¾	9½	9½	10¼	10½	11¼	11	10½	12	13½	13
Java,..... "	8½	11	12½	11¼	11½	14¼	14	14½	15¼	18	15	15½	17
Cotton—Mid. up,..... "	6¾	12	11	8⅞	10½	9½	9½	10¾	14¼	12¾	12	11½	13¾
Fish—													
Dry cod,.....qtl.	2 62	2 81	2 75	4 18	3 25	3 62½	3 87½	4 00	3 75	3 87½	4 00	4 87½	3 75
Mackerel, No. 1 Mass.,..keg,	9 87	11 62	10 25	11 00	12 50	16 50	20 00	20 75	21 00	18 75	16 25	17 25	14 50
Fruit—													
M. R. Raisins,.....box,	1 47	2 75	2 12	1 65	2 77	2 80	2 42	3 25	4 75	2 50	2 20	2 85	1 55
Dried apples,.....lb.	....	10	4	6¼	4¼	6	6¾	9	10½	6	8½	5	3½
Hay,.....hundred,	47	65	60	75	1 00	75	1 12½	80	75	45	75	95	80
Hops,.....lb.	8	17	25	29	20	30	19	9	10	8	13	10	16
Indigo—Manilla,..... "	72	70	75	70	80	80	85	75	75	75	75	75	60
Iron—													
Scotch pig.....ton,	26 75	20 50	21 00	20 00	35 00	40 00	27 50	32 00	36 00	25 50	25 00	24 00	21 00
Common English bar,... "	55 00	43 00	36 50	35 00	66 00	76 00	56 00	62 00	60 00	47 00	47 00	40 00	44 00
Laths,.....M.	1 63	1 25	1 65	2 25	1 75	2 25	2 00	1 87½	1 87½	1 18¾	1 45	1 75	1 20
Leather—Hemlock sole,.....lb.	15	16	15	15	17	22	22	26	29	25	26	21	19
Lime—Common Rockland,..bbl.	90	70	80	87	95	1 15	1 00	1 00	90	70	70	70	80
Liquors—Cognac brandy,...gall.	2 25	2 10	2 25	2 00	2 75	3 75	4 70	5 00	5 50	4 25	4 00	3 00	3 20
Domestic whiskey,..... "	22½	24	23	20½	23	26½	37	28½	29	21	25	22½	18
Molasses—													
New-Orleans,.....gall.	23½	26	31	29	28	24	28	47	75	35	39	49	33
Muscovado,..... "	23½	23	25	24	25	26	26	36	62	30	31	30	22
Cardenas,..... "	19¼	18¼	20	19	22	20	23	30	54	24	25	27	17

Naval Stores—														
Spirits turpentine,.....gall.	34	32	37	49	65	61	44	40	48	49¾	53	47	80	
Rosin, common,.....bbl.	95	1 08	1 25	1 25	1 40	1 70	1 70	1 67½	1 90	1 52½	1 70	1 57½	1 85	
Oils—														
Whale, crude.....gall.	36	43	43	75	52	57	66	75	73	56	50	42	40	
Whale, manufactured,... "	49	56	52	90	68	67	75	86	83	68	60	55	57	
Sperm, crude,..... "	1 04	1 16	1 29	1 25	1 28	1 53	1 79	1 80	1 45	1 22	1 40	1 30	1 37	
Sperm, manufactured,... "	1 12	1 20	1 27	1 31	1 35	1 60	2 05	2 05	1 55	1 35	1 45	1 45	1 60	
Linseed, ... "	58	78	74	63	61	92	84¾	75	60	68	63	60	58	
Provisions—														
Pork, mess,.....bbl.	10 06	10 25	15 00	18 75	15 75	14 50	17 37½	19 00	23 00	18 75	16 35	17 75	17 87	
Pork, prime,..... "	8 25	8 50	13 00	16 75	13 37	13 25	14 37½	15 50	18 90	15 35	12 75	14 25	13 25	
Beef, mess, country,..... "	12 12	9 25	9 75	10 00	10 00	11 00	11 00	8 50	13 50	11 50	8 25	5 25	6 00	
Beef, prime,..... "	8 25	6 00	5 50	6 00	5 75	7 25	8 50	8 00	11 25	8 50	6 50	4 25	4 25	
Pickled hams,.....lb.	5¾	6½	9	9¾	9½	8¾	9½	9¾	11	10	9½	9½	8½	
Pickled shoulders,..... "	4	3½	6¾	8	6¼	6	7¾	7½	9	7¾	6½	7¼	6½	
Lard,..... "	6¼	6½	9¾	10	9¾	10	10¾	10	14¼	11⅞	11⅝	11¾	9⅞	
Butter, State,..... "	17	18	16	22	20	25	26	20	27	25	22½	18	16	
Cheese,..... "	6½	7¾	7	8½	9½	10	11	10	13	8¾	10	10	7	
Rice,.....cwt.	3 12	3 50	2 87	3 62	4 37	4 00	6 00	4 25	5 00	4 25	4 00	4 12½	5 75	
Salt, Liverpool fine,.....sack,	1 25	1 37	1 40	1 15	1 57	1 70	1 45	1 78	1 45	1 37½	1 50	1 70	1 60	
Seeds—Clover,.....lb.	6	6½	9	6¾	10½	8¾	10¾	12	11	7½	8¾	8½	8	
Timothy,..... tce.	19 50	13 00	16 00	15 00	16 00	20 00	28 00	24 50	24 50	18 25	15 00	16 00	18 75	
Soap—New-York,.....lb.	4¾	5	5	5½	6	7	6	6	6	5	5½	6	5½	
Castile,..... "	10	9¾	9¾	9¾	10⅝	11⅛	10¾	10¾	11¼	12½	9¾	10	10	
Spices—Pepper,..... "	6¾	8	8¾	9¾	11	10¾	10¾	12¾	9¾	9¾	8¾	8		
Nutmegs,..... "	97	1 05	97	87	97	1 17	1 00	92½	85	57½	47½	44	40	
Sugars—														
New-Orleans,..... "	4½	4½	5	4¾	5	4¾	5¾	7⅛	12¼	6½	6¾	7	5¾	
Cuba,..... "	4½	4¾	5¼	4¾	4¾	4⅞	5½	7	10¾	5½	6¾	6¾	4¾	
Refined white,..... "	8¾	8⅞	8¾	7⅞	8¾	8¾	8¾	10¼	14	9¾	9¾	9½	7¾	
Tallow,..... "	8	7	7¼	8¾	9½	12¾	11½	10½	11¼	10½	10½	10¼	9	
Teas—														
Young Hyson,..... "	43	47	53	55	50	60	43	35	45	35	39	40	50	
Souchong,..... "	33	26	24	18	17	30	30	30	40	30	38	38	40	
Oolong,..... "	..	35	33	30	29	40	40	40	50	37	43	35	35	
Tobacco—														
Kentucky,..... "	6	7	9	7	7	8½	10	12½	16	12	11	10	9	
Manufactured,..... "	18½	18	27	19	20	20	24	28	32	24	20	20	17	
Whalebone—Polar,..... "	29	32½	31	51	31	36½	44	62	90	1 00	90	90	75	
Wine—Port,.....gall.	1 75	1 15	1 12	1 00	1 25	2 25	2 75	2 50	2 75	2 50	2 50	2 50	3 50	
Madeira,..... "	57	1 75	1 70	1 62	1 75	2 50	2 75	2 50	3 00	3 50	3 00	2 00	4 00	
Wool—														
Common,.....lb.	30	32	40	26	42	38	30	32	39	25	40	35	32	
¾ blood,..... "	33	36	43	31	47	45	37	45	50½	34	50	48	40	
Merino,..... "	36	40	47	36	52	50	45	48	56	37	56	55	47	
Pulled, No. 1,..... "	27	31	37	27	41	35	24	34	37	22	38	32	23	

IMMIGRATION OF THE PORT OF NEW-YORK.

Extracts from the Report of the Commissioners of Emigration, for the year ending December 31, 1860.

Number of Passengers landed at this Port.—The whole number of passengers landed at this port during the year 1860 was 155,371. Of these, 50,209 were citizens, or persons not subject to bonds or commutation, and 105,162 were aliens, for whom commutation was paid, or bonds executed; showing an increase in alien emigrants of 25,840 more than in 1859, and 26,573 more than in 1858, but being 78,611 less than in the year 1857, and 37,180 less than 1856, whilst the proportion to the average of former years, since 1847, is much less than half. Of these emigrants, 47,330 were from Ireland, 37,899 from Germany, 11,361 from England, and 8,572 from other countries.

Emigrant Refuge and Hospital, Ward's Island.—The commissioners hold in fee one hundred and six acres on Ward's Island, together with appurtenant water-rights and marsh partly covered with water. These lands were purchased, as stated in former reports, from time to time, at prices much less than that for which adjoining lands are now sold, and were paid for either from the annual income or from funds obtained on mortgage, with which debt the property, greatly increased in value in itself, as well as by the buildings and other improvements, is still encumbered.

Landing-place for Emigrant Passengers at Castle Garden.—The establishment at Castle Garden, for the exclusive landing-place of emigrants, under the authority of the act of 1855, for the protection of emigrants, has now had its utility confirmed by the experience of a fifth year. The able and efficient superintendent, JOHN A. KENNEDY, who first organized this department, and to whom we are indebted for much of its usefulness, continued to discharge the duties of this station until June last, when he resigned on accepting the appointment of superintendent-general of the police of the metropolitan district. The duties of his station have been transferred to the secretary and general agent, by whom they have since been efficiently performed. It may be observed, that the combination of these duties with others of the general agent is now made more practical by the removal of all the offices of the commission in the city to Castle Garden.

Marine Hospital, Seguine's Point.—About fifty acres of land, at Seguine's Point, had been purchased in 1858, with a view to the purposes of a marine hospital for pestilential or infectious diseases, by the former commissioners for the removal of Quarantine. It had been abandoned as to those objects, from various causes which have been stated to the legislature, but remained under the charge of this board; the legal title, as in respect to the other real estate held by them, being vested in the Commissioners of Emigration in trust for the people of the State of New-York. The property having been purchased for the

purposes of Quarantine, and paid for from an appropriation from the State treasury, it seemed perfectly proper to apply whatever sum could be raised, by sale or mortgage, to the support of the present floating hospital.

Operations of the Emigrant Landing Dépôt during the past year.—The total number landed, including those not subject to bonds or commutation, was 108,682, against 85,602 in 1859, and 84,226 in 1858. The avowed destination of the passengers will be found on page 296. These passengers arrived from 14 different ports, in 582 vessels, as is shown by table at the foot of this page. Table on page 297 exhibits the relative proportion of steam and sailing vessels bringing these passengers, and a comparative statement of the same for the four preceding years. As an evidence of the favor with which the application of steam vessels to this branch of the passenger trade continues to be received, the number of steamers landing passengers at the dépôt has increased from 22, bringing 5,111 passengers, in 1856, to 109, bringing 34,247, in 1860; and which latter would undoubtedly have been larger, were it not for the partial suspension of one of the foreign lines, which stopped running towards the close of the year. The relative proportion of passengers in steamers, as compared with sailing vessels, is even more marked than in 1859; for, while in that year the average number brought by steamers was $230\frac{68}{103}$, against $184\frac{266}{333}$, showing a difference in favor of the former of 49 passengers, the average number brought by steamers last year was $314\frac{21}{103}$, against $199\frac{118}{313}$ by sailing vessels, showing a difference in favor of the steamers of 115 passengers per vessel.

The Ports whence Emigrant Passenger Vessels have arrived, together with the nationality and number of Vessels, and number of Emigrant Passengers and others from each Port, landed at Castle Garden during the Year 1860.

Port whence sailed.	Nation.	Number of Vessels.	Number of Bondable Passengers.	Number who have returned to the U. S.	Total Passengers.
Liverpool, England,....	Gt. Britain,	213	54,832	4,122	58,954
London, " ...	"	47	3,204	450	3,654
Bristol, " ...	"	1	81	11	92
Glasgow, Scotland,....	"	9	231	60	291
Galway, Ireland,.....	"	11	4,305	223	4,528
Havre,.....	France,	54	11,470	513	11,983
Rotterdam,.....	Holland,	9	212	5	217
Bremen,.....	Bremen,	71	14,884	544	15,428
Hamburg,.....	Hamburg,	48	11,554	1,063	12,617
Antwerp,.....	Belgium,	14	625	30	655
Guthenberg,.....	Sweden,	2	135	....	135
Genoa, Italy,.....	Sardinia,	1	94	5	99
Leghorn,.....	Tuscany,	1	13	5	18
Porto Cabello,.....	Venezuela,	1	10	1	11
		482	101,650	7,032	108,682

Number and Destination of Passengers arrived at New-York during the Year 1860. *States where Emigrants said they intended to go.*

States where bound.	Number of Emigrants going to each of the different States.	States where bound.	Number of Emigrants going to each of the different States.
Canada West,	1,872	Wisconsin,	2,589
California,	1,141	Alabama,	45
Connecticut,	2,579	Arkansas,	21
Delaware,	123	Australia,	1
District of Columbia,	301	Bermuda,	1
Illinois,	4,077	Canada East,	5
Indiana,	1,106	Central America,	8
Iowa,	776	Cuba,	29
Kentucky,	650	Florida,	17
Louisiana,	321	Georgia,	178
Massachusetts,	6,371	Kansas,	92
Michigan,	1,478	Mexico,	9
Maryland,	1,014	Nebraska,	46
Maine,	142	New-Brunswick,	42
Minnesota,	466	New-Mexico,	1
Missouri,	1,614	Nova Scotia,	21
Mississippi,	15	Oregon,	13
New-Hampshire,	123	Prince Edward's Island,	1
New-Jersey,	3,414	South America,	18
New-York,	56,131	Sandwich Islands,	1
North Carolina,	43	Utah,	905
Ohio,	5,195	Vancouver's Island,	3
Pennsylvania,	9,512	West Indies,	9
Rhode Island,	1,291		
South Carolina,	296	Uncertain,	214
Tennessee,	209	Unknown,	3,368
Texas,	63		
Virginia,	452	Total,	108,682
Vermont,	270		

Number and Nativity of Alien Passengers arrived at the port of New-York during the year 1860, *who were liable to Bonds or Commutation, under the Acts of April* 11, 1849, *July* 11, 1851, *and April* 13, 1853:

From Ireland,	47,330	From Poland,	80
" Germany,	37,899	" Belgium,	76
" England,	11,361	" Russia,	61
" Scotland,	1,617	" Norway,	53
" France,	1,549	" Canada,	25
" Switzerland,	1,422	" Nova Scotia,	23
" Wales,	811	" Mexico,	22
" Italy,	542	" Portugal,	19
" West Indies,	523	" China,	13
" Denmark,	495	" Sicily,	4
" Holland,	440	" East Indies,	4
" Sweden,	361	" Turkey,	3
" Spain,	228	" Greece,	2
" South America,	110		
" Sardinia,	89	Total,	105,162

Showing the relative proportion of Sailing and Steam Vessels bringing Passengers which were landed at Castle Garden during the year 1860.

1860.	SAILING VESSELS.		STEAM VESSELS.		TOTAL.		STEAMERS UNDER THE FLAG OF					
	Vessels.	Passengers.	Steamers.	Passengers.	Vessels.	Passengers.	United States.	Great Britain.	Bremen.	Hamburg.	Belgium.	France.
January,.....	14	1,509	6	558	20	2,067	..	4	1	1	..	..
February,....	7	597	8	953	15	1,550	..	7	..	1	..	..
March, ...	26	2,084	8	1,756	34	3,840	..	6	1	1	..	..
April, ...	22	3,896	7	3,134	29	7,030	..	5	..	2	..	..
May, ...	63	17,700	11	5,998	74	23,698	1	6	1	3	..	..
June,.....	26	8,780	8	3,514	34	12,294	1	5	1	1	..	..
July,.....	36	9,153	14	4,174	50	13,327	1	9	1	3	..	..
August, ...	35	6,399	10	2,419	45	8,818	1	7	1	1	..	..
September,..	35	6,478	9	3,769	44	10,247	1	5	1	2	..	..
October,.....	51	8,591	8	3,165	59	11,756	1	4	1	2	..	..
November, ..	31	5,604	10	3,020	41	8,624	..	7	1	2	..	..
December,...	27	3,644	10	1,787	37	5,431	..	7	1	2	..	..
Total, 1860,	373	74,435	109	34,247	482	108,682	6	72	10	21	..	..
Total, 1859,	332	61,384	105	24,218	437	85,602	13	58	15	19	..	..
Total, 1858,	367	67,837	84	16,389	451	84,226	14	47	6	17	..	..
Total, 1857,	588	164,650	69	20,236	657	185,186	3	48	1	10	7	..
Total, 1856,	552	136,459	22	5,111	574	141,570	..	12	..	7	2	1

THE NUMBER OF STEAMERS FROM DOMESTIC PORTS FOR THE YEAR IS AS FOLLOWS:

Where from.	1859.		1860.
New-Orleans,.....	..	....	2
Savannah,.....	159	....	168
Charleston,.....	101	....	104
Richmond and Norfolk,.....	106	....	190
Washington, D. C.,.....	17	....	53
Baltimore,.....	135	....	334
Philadelphia, *via* Sandy Hook and *via* Canal,.	..	....	667
Portland,.....	62	....	93
New-Bedford,.....	156	....	172
Providence,.....	385	....	410
New-London,.....	104	....	53
Wilmington, N. C.,.....	..	....	15
Total,.....	1,485	....	2,261

COMPARATIVE STATEMENT—ARRIVALS AND PASSENGERS.

Year.	*Foreign Arrivals.*		*Passengers, Foreign.*		*Passengers from California.*
1850,.....	3,487	....	226,287	....	....
1851,.....	3,888	....	299,081	....	18,207
1852,.....	3,822	....	310,335	....	12,158
1853,.....	4,105	....	299,425	....	15,517
1854,.....	4,173	....	331,809	....	15,929
1855,.....	3,391	....	152,234	....	13,400
1856,.....	3,869	....	159,284	....	11,925
1857,.....	3,902	....	203,499	....	11,265
1858,.....	3,483	....	97,632	....	8,860
1859,.....	4,027	....	101,320	....	16,249
1860,.....	4,451	....	266,627	....	10,710

Arrivals at this Port, from Foreign Ports, during the year 1860.

Vessels.	1858.		1859.		1860.
Steamers,	213	....	268	....	319
Foreign war steamers,	....	....	....	....	2
Corvettes,	....	....	....	....	1
Ships,	723	....	813	....	797
Barks,	723	....	872	....	978
Barkentines,	....	....	18	....	20
Brigs,	1,085	....	1,269	....	1,335
Galliots,	....	....	....	....	2
Schooners,	735	....	887	....	972
Yachts,	....	....	....	....	1
Canal boats,	....	....	....	....	24
Total,	3,481	....	4,027	....	4,451

Number of Steamers, War Steamers, Corvettes, Ships, Barks, Brigs, Galliots, Schooners, Canal Boats, arrived, of each Nation, at the Port of New-York, in the year 1860.

Nation.	Steamers.	War Steamers.	Corvettes.	Ships.	Barks.	Barkentines.	Brigs.	Galliots.	Schooners.	Canal Boats.	Total.
American,	155	..	..	..	680	..	730	..	18	..	793	..	..	..	847	..	24	..	2,952
Austrian,	..	.	..	..	4	..	6	..	..	..	6	..	..	..	..	..	..	..	16
British,	132	..	..	..	39	..	114	..	2	..	433	..	..	..	412	..	..	..	1,132
Bremen,	10	..	..	..	26	..	46	..	..	..	17	..	..	..	1	..	..	..	100
Belgian,	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	2
Brazilian,	..	..	..	..	1	..	..	..	..	..	2	..	..	..	..	..	..	..	3
Dutch,	..	..	..	..	..	..	1	..	5	..	16	..	2	..	1	..	..	..	25
Danish,	..	..	..	..	..	..	1	..	1	..	9	..	..	..	1	..	..	..	12
French,	..	..	1	..	..	..	1	..	8	..	8	..	..	..	2	..	..	..	20
Hamburg,	21	..	..	..	..	..	22	..	8	..	2	..	..	..	1	..	..	..	54
Hanoverian,	..	..	..	..	..	..	2	..	4	..	..	..	..	..	..	..	..	..	6
Italian,	..	..	..	..	..	..	..	..	5	..	..	..	1	..	..	..	..	..	6
Mecklenberg,	..	..	..	..	..	..	..	..	3	..	..	..	3	..	..	..	..	..	6
Mexican,	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Norwegian,	..	..	..	..	..	..	6	..	13	..	..	..	7	..	..	..	..	..	26
Neapolitan,	..	..	..	..	..	..	..	..	3	..	..	..	5	..	..	..	..	..	8
Oldenberg,	..	..	..	..	..	..	..	..	3	..	..	..	3	..	..	..	1	..	7
Prussian,	..	..	..	..	..	..	5	..	11	..	..	..	5	..	..	..	..	..	21
Portuguese,	1	..	..	..	..	..	1	..	..	..	..	..	4	..	..	..	4	..	10
Russian,	..	..	..	..	..	..	6	..	1	..	..	..	..	..	..	..	2	..	9
Sardinian,	..	..	..	..	..	..	..	..	2	..	..	..	2	..	..	..	..	..	4
Spanish,	..	..	1	..	..	..	2	..	..	..	..	..	4	..	..	..	..	..	7
Swedish,	..	..	..	..	..	..	1	..	5	..	..	..	1	..	..	..	1	..	8
Sicilian,	..	..	..	..	..	..	..	..	8	..	..	..	6	..	..	..	..	..	14
Tuscan,	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Venezuelian,	..	..	..	..	..	..	..	.	..	..	..	..	1	..	..	..	..	..	1
Totals,	319		2	1	797		973		20		1,335		2		973		24		4,451

THE NEW-YORK CLEARING-HOUSE.

THE following is a condensed statement of the Clearing-House transactions during the year ending October 1, 1860:

1859.	*Exchanges.*	*Balances.*	*Net Deposits & Circulation.*	*Specie.*	*Loans.*
October,.....	$ 577,187,188 83	$ 28,528,249 95	$ 78,086,946	$ 19,498,144	$ 119,887,320
November,.....	576,788,665 61	30,882,954 40	82,801,819	20,228,341	120,118,087
December,.....	558,614,919 04	32,900,586 93	84,657,541	20,046,667	122,187,034
1860.					
January,.....	587,526,688 26	30,876,993 83	86,621,670	19,602,000	125,491,423
February,.....	549,151,089 37	30,427,854 31	85,759,144	19,924,801	124,091,982
March,.....	655,631,812 00	34,871,115 61	89,041,198	23,086,812	125,012,700
April,.....	628,891,971 62	32,711,189 57	92,466,058	22,599,132	130,606,781
May,.....	676,084,448 04	34,658,185 74	91,851,186	23,815,746	127,479,520
June,.....	576,663,463 13	33,894,050 74	90,154,741	24,535,457	124,792,271
July,.....	586,218,431 86	30,627,869 89	90,695,047	22,751,694	127,244,241
August,.....	617,169,529 13	32,403,666 52	93,023,374	22,128,189	130,118,247
September,.....	616,220,000 30	23,454,270 88	88,727,833	19,035,180	129,543,923
309 days,.....	$ 7,231,143,056 69	$ 380,698,438 87			
Average per day,	$ 23,401,757 47	$ 999,007 89			

One of the most satisfactory financial features of the year was the resolution adopted in November, 1860, by the banks of the city of New-York, that each shall maintain, after February 1st, 1861, an average specie reserve of twenty-five per cent. of its net liabilities.

At a meeting of the officers of the banks of the city of New-York, at the Merchants' Bank, on Wednesday, the 21st of November, 1860, the following proceedings were unanimously adopted, viz.: In order to enable the banks of the city of New-York to expand their loans and discounts, and also for the purpose of facilitating the settlement of the exchanges between the banks, it is proposed that any bank in the Clearing-House Association may, at its option, deposit with a committee of five persons—to be appointed for that purpose—an amount of its bills receivable; United States stocks, Treasury notes or stocks of the State of New-York, to be approved by said committee, who shall be authorized to issue thereupon to said depositing bank certificates of deposit, bearing interest at seven per cent. per annum, in denominations of five and ten thousand dollars each, as may be desired, to an amount equal to seventy-five per cent. of such deposit. These certificates may be used in the settlement of balances at the Clearing-House for a period of thirty days from the date hereof, and they shall be received by creditor banks, during that period, daily, in the same proportion as they bear to the aggregate amount of the debtor balances paid at the Clearing-House. The interest which may accrue upon these certificates shall, at the expiration of the thirty days, be apportioned among the banks which shall have held them during the time. The securities deposited with said committee as above named shall be held by them in trust as a special deposit, pledged for the re-

demption of the certificates issued thereupon. The committee shall be authorized to exchange any portion of said securities for an equal amount of others, to be approved by them at the request of the depositing bank, and shall have power to demand additional security either by an exchange or an increased amount, at their discretion. The amount of certificates which this committee may issue as above shall not exceed $5,000,000. This agreement shall be binding upon the Clearing-House Association when assented to by three-fourths of its members.

Resolved, That in order to accomplish the purpose set forth in this agreement, the specie belonging to the associated banks shall be considered and treated as a common fund for mutual aid and protection, and the committee shall have power to equalize the same by assessment or otherwise.

For this purpose statements shall be made to the committee of the condition of each bank on the morning of every day before the commencement of business, which shall be sent with the exchanges to the manager of the Clearing-House, specifying the following items, viz.:

1. Loans and discounts. 2. Deposits. 3. Loan certificates. 4. Specie.

Resolved, That after the 1st of February next, every bank in the Clearing-House Association shall have on hand at all times, in specie, an amount equal to one-fourth of its net liabilities, and any bank whose specie shall fall below that proportion shall not make loans or discounts until their position is re-established, and we, as members of the Clearing-House Association, agree that we will not continue to exchange with any bank which shall show by its two successive weekly statements that it has violated this agreement.

The chairman appointed the following named gentlemen as the committee: Moses Taylor, of the City Bank; James Punnett, of the Bank of America; R. W. Howes, of the Park Bank; A. S. Fraser, of the Seventh Ward Bank; Charles P. Leverich, of the Bank of New-York.

John A. Stevens, *Chairman.*

W. T. Hooker, *Secretary.*

The aggregate exchanges of the banks of this city for the year, up to the 1st October last, were a fraction over seven thousand two hundred and thirty-one millions of dollars, or a daily average in excess of twenty-three millions of dollars.

In the year 1856–7, when these exchanges were $8,333,226,718, [see pages 13–14, Chamber of Commerce Report of last year,] or nearly twenty-seven millions per day, the bank reserve of specie in this city was, at various times, under twelve millions of dollars. This slender reserve of specie shows upon what an unreliable basis the banking operations of that year were transacted; leading (as the result proved) to general suspension of payment.

More sound principles have since gained ground in this community, and the recent determination to provide by the banks against similar revulsions from external causes, by maintaining an adequate specie reserve, may be looked upon as one of the most desirable changes of the day.

The importance—even necessity—of this measure (in view of the heavy cash liabilities of the banks) may be seen by reference to the official tabular statement of the banks of this State, [page 291 of this volume.] According to this statement the individual deposits at the

Close of the year 1860 were	$110,000,000
Balances due other banks, &c.,	35,000,000
Circulation,	28,000,000
An aggregate of cash liabilities amounting to	$173,000,000

to meet which there was then on hand an aggregate specie reserve less than twenty-seven millions of dollars, or about fifteen per cent. Of this sum, twenty-four and a half millions were held by the banks of this city, leaving the small sum of $1,830,000 in specie among the two hundred and ninety banks of the interior, to meet cash liabilities exceeding fifty-five millions of dollars. These facts indicate that the country bankers of this State keep a large portion of their reserve fund or unemployed capital on deposit in this city, with which to meet their circulation and the demands for exchange. These deposits are made with the implied understanding that the balances shall be at all times available.

The banks of this city, in pursuance of a resolution adopted in November last, have since reported at the close of the first quarter in the year 1861, a specie reserve of $41,000,000, against cash liabilities of

Individual deposits,	$93,000,000
Balances due other banks,	22,000,000
Circulation,	8,000,000
Total cash liabilities, March, 1861,	$123,000,000

When we consider that New-York city has been, for some years, the commercial and financial centre of the United States; that the domestic exchanges are almost invariably in favor of this city, it is not surprising that the balances held by the banks of this city in favor of the country banks and bankers have increased from ten millions, in 1851, to twenty-nine millions in the year 1860. If to these balances we add the deposits held by individual bankers in this city for account of their country correspondents, the aggregate would reach beyond the sum of fifty millions of dollars, making, with circulation and individual deposits, a total of over one hundred and fifty millions, payable on demand.

To meet the weekly, daily (and, we may say, hourly) drafts of country bankers upon these deposits, it must be considered that our New-York moneyed institutions should maintain, at all times, a large specie reserve, in order to avoid a recurrence of the lamentable revulsions which marked the year 1857 in this city, and of 1860 in other communities. The credit and honor of New-York demand that the large deposits usually made here by the bankers of the thirty-four States should be maintained *intact*, or that an adequate specie basis be invariably maintained in view of the perpetual, and, at times unfavorable, fluctuations of the domestic and foreign exchanges.

We have reason to believe that this financial policy will be hereafter maintained, and that the creditors of our banks and bankers will not again have occasion to complain (as in the year 1857) of speculation and extravagance in this community.

REPORT ON THE HARBOR OF NEW-YORK.

From the Annual Report of the Superintendent of the United States Coast Survey.

Report of Assistant HENRY MITCHELL *on the physical surveys of New-York harbor and the coast of Long Island, with descriptions of apparatus for observing currents, &c.*

BOSTON, *September* 30, 1859.

SIR,—I have the honor to inform you that the field-work comprehended in your plan for the physical survey of New-York harbor has been completed by the operations of the past season.

At the commencement of this work it was quite impossible to foresee the form it would ultimately assume, the questions to which it would give rise, or the investigations to which it would lead. Neither the precise character of the observations to be made, nor the extent to which they should be carried, could be estimated in an undertaking in many respects quite novel and without precedent.

Certain changes in the forms of shoals and channels had been revealed by the comparison of the early surveys with those of more recent date, and the questions arose—To what causes are these changes due? and—To what end do they progress? What are the natural forces which build in one direction shoals and beaches, while opening elsewhere new channels, or wearing away the shores? These were the problems for the solution of which the physical survey was instituted.

The general plan of this work, to which you first directed my attention, has been adhered to throughout; since your subsequent instructions have referred to the limits of each season's work, rather than to the character of it. By this plan we have been required to observe, and make note of, every natural operation, whether of tides, currents, winds or waves; in fine, to compile for a certain period a complete physical history of these elements from a systematic course of inquiry.

The field over which our observations have spread includes not only the harbor proper, but its approaches in all directions, extending up the Hudson River to Fort Washington, into Long Island Sound as far as Execution Light, through the Kills, over the bar and sixty miles out to sea. Throughout this field the periods, velocities and paths of the various currents are determined, as are also the experiences of the tide waves (both from the Sound and the ocean) in the different channels and avenues which they traverse. The disturbing effects of winds and freshets, the appearance of rips and eddies, together with general meteorological phenomena, have all been noted carefully.

The whole number of tidal and current stations which we have occupied exceeds one hundred and fifty, and at these the observations number many thousands. Many of the tidal stations were occupied one or more entire lunations, and at some of the current stations the observations were continued in unbroken series of half-hourly records for seven, nine and fourteen days. The aggregate amount of time spent on the field-work has not exceeded twelve months.

Rough computations of our observations were made in the intervals between the working seasons, and these acquainted us with the progress we were making, and pointed out the direction which succeeding inquiries should take. From the results of our labors we gained at each step confidence and encouragement. What appeared at first a tangled skein of accidental or inconstant causes, we ultimately recognised as orderly and harmonious relations; and, our methods of observing improving steadily, the work advanced to its close at a pace constantly accelerated.

The observations of the past season were confined to no special locality, but were made at various points where previous operations were incomplete or required connecting links.

Our field-work commenced the first of June, and the quiet weather which prevailed during this month was improved for the occupation of the more exposed stations—those near shallow portions of the bar and along the outside coast. We had designed to occupy a station which should, if possible, lie quite beyond the reach of the New-York harbor drift, and enable us to determine whether any oceanic current sweeps into the great bay formed by the coasts of Long Island and New-Jersey. For this purpose we anchored, in thirty fathoms water, nearly sixty miles east-southeast of Sandy Hook, where, during a period of fifteen hours, we measured the currents at the surface, and at depths of twenty-three and one hundred and fifty feet, besides a few determinations of the mean motion for the entire depth. At this station, nearly forty miles from the nearest land, we found regular tidal currents, nearly as strong as those observed at the light-ship the previous season. No oceanic current could be detected, but the augmentation of the ebb current, caused by the drainage of the land waters, was very appreciable. The velocities of the currents are not so regular at this station, from the fact that the depth of the moving water stratum is variable, at one time extending to the bed of the sea, at another reaching but a short distance below the surface. The directions of the flood and ebb drifts were found to be respectively west-southwest and east by south; which, making due allowance for the disturbing effects of the land waters, would indicate that the tide-wave has here a westerly motion. The land waters of which we have spoken are doubtless the combined drainage from New-York harbor and the various inlets; for, extending our observations along the south shore of Long Island, we found that they outlive the tidal currents, and establish themselves as a constant coastwise stream along the eastern portion of Fire Island beach.

The stations outside of the bar were eleven in number, at which above seventeen hundred observations were recorded, and of these more than five hundred were made at points below the surface. The greater part of our season's work lay in the lower bay or in the vicinity of the bar, where there remained some localities unexamined, and others at which previous examinations had given discordant results.

From the computations which followed the field-work of 1858, it appeared that where observations were sufficiently numerous the causes of a certain class of shoals were immediately deducible from the data obtained. It was ascertained, on making a composition of the currents at each station, with the assumption that they are to be regarded as forces acting simultaneously, that the resultants take directions towards the shoals as focal points; making it evident that the sand which forms these shoals

is gradually swept together from the neighboring channels. Simple as the dynamics of this natural process may be, its form can only be developed from the most accurate determinations of the elements. The resultant, for instance, may be a very small quantity from a station at which the adverse currents are very violent. In a case like this, the slightest error of observation, or even the selection of an unsuitable period, may give us a false result and lead us entirely astray. If the observations are not sufficiently frequent, they may fail to give the exact durations of certain phases of the currents; or if the positions of the stations are not closely determined, errors enter into the directions of the forces. Again: If the observations are not continued long enough to eliminate the diurnal inequalities, an undue weight will be given to some of the elements which enter into the problem. At the commencement of the past season, forewarned of these difficulties, I placed in the hands of my observers printed rules for their guidance, and required of each person a strict conformity to them. Twenty-one stations were occupied in the portion of the work to which I have just referred, and at these the aggregate number of observations reaches nearly five thousand, of which above eighteen hundred are from points below the surface. At these stations the observations were usually kept up in unbroken series of twenty-five hours each.

A more suitable period for observations of so exact a character could scarcely have been chosen; our operations were rarely suspended by bad weather, and few delays of any kind occurred.

In making observations upon bars and shoals, the disturbing effects of strong winds cannot be disregarded; for it not unfrequently happens that they change the direction of the current, or wholly reverse its course. In districts of shallow water the waves created by the winds have a motion of translation whose effect upon the log is very great; and although the observer is able to distinguish this sudden and uncertain motion from that of the more steady current, he cannot introduce a correction for it. Where the sea is deep, the impulses it receives from the winds result in simple undulations, giving to the log no horizontal motion whatever, so that, even when the swell is very heavy, accurate current observations are possible. As far as our experience has gone, we have never observed in the waves any power of transportation where the depth of water exceeds three fathoms.

Above the Narrows there were eight stations occupied—three in the main channel of the harbor, two in the Hudson and three in the East River. At these there were recorded over seventeen hundred observations, of which above eight hundred were made upon the sub-currents.

The stations in the harbor, as well as those in the Hudson River, were designed to furnish us with additional data relative to a class of remarkable counter-currents discovered the previous season. The former observations had established the fact, that along the main channel the currents of the lowest water stratum maintain velocities and directions quite at variance with those near the surface. It however remained to be proved whether the phenomena observed were continuous from station to station or mere local conditions; and if their continuity could be shown, the exact limits of their domain were to be ascertained. The information now in our hands affords, I am convinced, a full and faithful exhibit of these points.

The three stations in the East River lie in positions which the previous work had shown to be important, as embracing the terminus of the Hell Gate interference current. At one of these stations, which lies in the deep basin westward of the point of Blackwell's Island, some curious conditions of the sub-currents manifested themselves. Here the axis of the ebb (westerly) drift was observed to lie about twenty feet below the surface throughout the entire duration of this current; in other words, the current is stronger at this depth than at any other point above or below. There are resemblances between this phenomenon and those already referred to as appearing in the main channel of the harbor, but I am doubtful whether we can class them together. In the discussion of our results, we propose to group the currents of the upper harbor according to tidal hours obtained from the self-registering gauge at Governor's Island, and those of the lower harbor and its approaches, according to tidal observations made simultaneously by some of our own party at Sandy Hook.

The closing work upon the physical survey of New-York harbor, which we have briefly described, did not occupy us during the entire season, and there proved to be ample time for the other operations directed by your instructions, viz., inquiries into the physical conditions of the bays and inlets along the south shore of Long Island.

Glancing at a chart of our coast, one may see on the south shore of the island of Nantucket a series of small ponds separated from the sea by narrow reaches of sand. On Martha's Vineyard the same features may be observed along the outer shore, except that here the larger basins or lagoons have occasional outlets through the strips of sand beach. Further to the westward, upon the coast of Long Island, appear similar basins, so extensive as almost to form inland seas with outlets of considerable depth, through which vessels may pass. Here are fully established the forms which may be distinguished as the leading characteristics of the Atlantic coast to the southward, and of the entire Gulf shore. From the past history of the sandy portion of our sea-coast, it appears that the outlets to which we have referred are never permanent, but continually shift their positions, either by gradual encroachments and recessions of the sand reaches, or by suddenly closing up at one point and breaking away at another. The design of our study was to ascertain, if possible, the causes which maintain these extended sandy reaches, and the agencies which create the channels through them. In this undertaking, the line of stations, to which reference was made in the former part of this report, extending along the coast, at intervals of from five to twelve miles from Coney Island to a point twenty-five miles east of Fire Island light, gave us all the requisite data for a complete knowledge of the shore currents and we added to these series of current observations at Fire Island, Crow Gut and Rockaway inlets, besides others from stations in the Great South Bay. By half-hourly records at gauges temporarily erected, the form of the tide-wave as it enters Fire Island Inlet was compared with that observed at Sandy Hook on the one hand, and that at the eastern extremity of the Great South Bay upon the other. At some of the outside stations we threw over sinking articles, hoping to find them again upon some portion of the beach, and thus be able to determine the direction of the movements on the bottom of the sea. The first class of articles we tried were balls made of cement, with corks enclosed, giving them what we

supposed to be the requisite specific gravity. On a former occasion these cement balls were used quite successfully along the shores of Sandy Hook, but we now found them to fail entirely on this coast, where the currents are more feeble. We subsequently had recourse to the large skimmer shell (*mactra solidissima*) which we collected from the shores, and marked with drills. Some of these, cast over in three fathoms water off Oak Beach, travelled eastward, and crossing Fire Island Inlet, were swept on shore four miles to the eastward of their place of deposit. In the performance of this journey they were occupied over two weeks, during a prevalence of easterly winds. Of three hundred shells cast into the sea, one hundred were recovered—a much larger proportion than we could possibly have expected to find among the shifting sands and the miscellaneous stranded articles upon these beaches. The easterly preponderance in the movements of the currents along the bed of the sea, which the journey of these shells revealed, corresponds with the results from previous observations of the surface drifts.

As our inquiries proceeded, it became evident that the currents, powerful though they may be to scour channels and form the ocean bed, cannot alone effect the peculiar changes which are observed to take place in the beaches, but that the waves take a part, not insignificant, in these operations. In the shallow waters along these alluvial shores the waves, driving in from the ocean, acquire violent horizontal movements, and dash along the beach with a force in comparison with which the strongest currents are quite impotent. In order that we might the better understand and determine the precise action of the waves and the relation of their office to that of the current, we made a very careful examination of the conditions in miniature forms of bays and inlets, where the limited field of observations afforded us a comprehensive view of the natural activities at work. The results of this examination have already been laid before you, with such conclusions from them as were immediately obvious.

In the course of this and former reports I have referred repeatedly to the observations of currents at different depths, and it has occurred to me that some description of the apparatus in use should here be given, in order that the reliability of the results should be established.

Descriptions of Apparatus.

For observations upon the surface currents we use a "tube-log," which is simply a tin cylinder four inches in diameter and six feet long. This tube is partially filled with water, so as to sink nearly its whole length and maintain an upright position; and a graduated line being attached, the observations are made as with an ordinary ship's log. We have found that a log of less draught than this is liable to be affected by the wind.

When we desire to obtain the mean motion of a stratum of greater depth, we use twenty-four feet feet tubes, and in some cases those as long as forty-eight feet.

If the velocity of the current in the lowest water stratum is desired, we take the following course: Two copper globes of equal dimensions are connected by wire rope of the smallest possible size compatible with the strength required. One of these globes, being filled with water, is allowed to sink the whole length of the connecting line, while the other being empty, or only partially loaded, swims at the surface of the sea. To the upper globe the log line is secured. The velocity with which the globes,

thus connected, will move, is a mean of the rates at which the upper and lower water strata are flowing; and if simultaneous observations are made with this apparatus and the surface log, before described, we are furnished with the means of obtaining by calculation the velocity of the lowest stratum. This method may be employed where the water is not so deep as to give to the connecting wire rope an extent of surface which, exposed to the current, may require consideration in the problem.

The instruments I have described thus far are similar to those which have been used in determining the discharge of canals in Europe. In the application of these to inquiries on a larger scale, I have found it necessary to make certain modifications of them to insure accuracy.

It not unfrequently occurs that the velocity of the surface drift is many times greater than that of the lower stratum, or holds altogether a reverse direction, so that the motion of the globes is quite at variance with that of the surface log. In a case like this, the graduated line secured to the globes is borne away by the surface current, and the observer is deceived. The full extent of this difficulty will be appreciated when it is considered that the line of which I have spoken is necessarily of considerable size, the strength of six men being sometimes required to draw in the globes. I propose to obviate this difficulty by the following arrangement: Within the upper globe, made of wood in this case, a reel is placed, upon which a small log-line, passing in at an aperture at the pole, is wound by a crank from without. The extremity of this log-line is secured to a third globe, which swims freely upon the surface of the sea. When making an observation, the log-line is wound up until the floating globes are brought together; then, at a signal, the reel is loosened; and now, if the surface and sub-currents differ in velocity, the free globe separates from the others, and the observer notices the number of divisions of the log-line drawn out in thirty seconds. In this experiment the apparatus is in nowise connected with the vessel, but the observer follows in a boat until the trial is completed. Figure 1 (Sketch No. 40) shows the relative position of these globes during the course of the observations. In this figure A and B are the connected globes, while C is the free float. The weight of the globe B causes the swimming globe A to sink nearly to its pole, and the free float C is loaded so as to sink about the same distance. The graduated line, which measures the separation of the floating globes, may be seen, one end fastened to a ring upon the free float C, the other passing in at the pole of the globe A. Figure 2 is an enlarged representation of the globe A, opened so as to show the reel within. The water, which enters the globe freely, acts as a check, preventing this reel from acquiring an undue momentum with any sudden jerk of the line caused by the waves. In this figure may be seen the position of the crank by which the reel is wound; this crank is, of course, removed after the floating globes are drawn together. Upon the outside of the globe containing the reel every ten degrees are marked, that the observer may note in his record the amount submerged. In the reduction of these observations the extent of the wetted surfaces of the two connected globes must be considered, since, in the case of a difference of velocity between the upper and lower strata, the effective areas of the surfaces exposed to the two streams enter into the problem. In all positions the effective surface which a globe wholly immersed presents to the current is a great circle. The velocity attained by the connected globes is a *simple mean* of the

velocities of the superficial and lower strata when the effective surfaces are *equal;* and when these surfaces are *unequal*, the *mean* by *weight.* If x = velocity at surface, y = velocity at lowest point; then with equal surfaces we obtain velocity of globes $= \frac{1}{2}(x + y.)$ If the effective surfaces opposed to the drifts (portions of great circles) are unequal, and their areas be represented by a and b, we have the velocity of globes $= \frac{1}{a+b}(ax + by.)$ This expression represents the immediate result obtained by the original manner of using the globes if the vessel be at anchor; but, in our modification, the result of our experiment is the difference between the motion of the free and that of the connected globes, or $x - \frac{1}{a+b}(ax + by.)$ The extent of the wetted surface of the free globe will not affect the result, but it is convenient to have this globe of the same size as the others, so as not to be greatly affected by winds.

If the paths of the surface and sub-currents do not lie in the same vertical plane, the connected globes take an intermediate course, with velocity $= \frac{1}{a+b}\sqrt{\{(a\,x \text{ sin. } \beta_1 + by \text{ sin. } \beta_2)^2 + (a\,x \text{ cos. } \beta_1 + by \text{ cos. } \beta_2)^2\}}$, and $tan\ \theta$ (angle of direction) $= \frac{a\,x \text{ sin. } \beta_1 + by \text{ sin. } \beta_2}{a\,x \text{ cos. } \beta_1 + by \text{ cos. } \beta_2}$ when β_1 and β_2 represent the respective angles of direction of the upper and lower drifts.

When observations are to be made at sea, where there is a great depth of water, a further modification of the apparatus is necessary. In place of the two connected globes in the foregoing description, a hempen line is used, (perhaps two inches in diameter,) terminating in a wooden pole above and a leaden cylinder below, the former serving to float the shaft, while the latter sinks and straightens the line, and the reel is transferred to the free globe. The apparatus, thus modified, will serve to exhibit the difference between the surface drift and the mean velocity of a stratum of water whose depth equals the length of the shaft immersed. If we know the surface velocity we may readily obtain the velocity of the lowest point reached, *if we suppose the change of velocity from point to point to be uniform*, by subtracting the surface rate from twice the mean velocity. This supposition is not always correct, and must be tested by the following experiment: The log-line having been unfastened, the pole is passed through a copper globe, and the line drawn up until the globe can be secured at a point which will occupy a middle position of the wetted surface on again letting the shaft sink as far as it may. Upon a new trial, if the velocity observed is still the same, we may conclude that our supposition is correct; if not, we may, by shifting the position of the globe again and again, making at each remove an observation and record, or by using simultaneously several such shafts, calculate approximately the conditions of the sub-currents and the curve at which our deep shaft hangs. The globes which we have used measure two feet in diameter.

Before closing this rapid sketch of our devices for obtaining the data required by your instructions, I would refer briefly to a new form given to a pile used in securing a tide-gauge at Fire Island, and which, I think, possesses some peculiar advantages for use upon sandy coasts where there is a heavy sea. This pile is of oak, or other heavy and strong wood, and is so cut that the lower portion of it, for a space of six or eight feet, pre-

sents the appearance of a number of inverted frustrums of cones, placed one above another—the series terminating in a sharp and heavy shoeing. As a whole, it is required to have a greater weight than the sand and water it is intended to displace. On working this pile into the sand, by swaying it to and fro, in the usual manner, each cone, as it sinks, acts upon the sand *above* and *below*, as at once a lever and a wedge, giving to the whole a continual downward thrust. In the same way the waves, instead of tearing it up, cause it to work deeper and deeper, and thus the lateral oscillation of the sea is converted into vertical motion, and brought to our aid. Of course this downward tendency of the pile can be easily checked if too great for our purposes. As my description of this pile is not altogether clear, I annex a diagram, which will require no explanation.

Very respectfully, yours,

HENRY MITCHELL,
Assistant Coast Survey.

Professor A. D. BACHE,
Superintendent Coast Survey.

TIDES AND CURRENTS IN NEW-YORK HARBOR AND ITS APPROACHES.

This work, which has been going on under my immediate direction for several seasons past, was completed at the end of the summer by Assistant HENRY MITCHELL, so far as the principal field labors are concerned. It was commenced with the view of ascertaining the causes of certain important changes in the hydrography of the harbor as developed by the comparison of charts of different dates. All the natural forces, such as tides, currents, winds and waves, which might be supposed to concur in producing the physical effects noticed, were included in the series of observations, and the large amount of information thus obtained will, no doubt, when fully discussed, determine the conditions under which the harbor exists. In my last report reference was made to the discovery of a class of sub-currents, the motions of which were found to be quite at variance with those of the surface currents. The observations made during the present season connect these sub-currents with the path of the Hudson in its course through the waters of New-York bay, and for their full development it was found necessary to extend the current stations about sixty miles outside of the bar, and also along the coast of Long Island. In the latter vicinity the effect of the land waters was traced quite beyond the reach of the tidal drifts. Observations were made in the same quarter with a view of developing the conditions under which the inlets on the south shore of Long Island are maintained and for ascertaining the causes of their change in position. Thirty-seven current stations were occupied, the records from which contain over eight thousand observations. More than three thousand of the entries are for points below the surface. Appendix No. 26 contains the report of Assistant MITCHELL on the season's labors. His report contains remarks on improvements in the apparatus for observing currents at great depths below the surface, and refers also to an improved form of pile for securing tide-gauges on the sea-coast.

HARBORS AND RIVERS OF THE UNITED STATES.

TABLE SHOWING THE LEAST WATER IN THE CHANNELS OF CERTAIN HARBORS, RIVERS AND ANCHORAGES ON THE COASTS OF THE UNITED STATES, REPRINTED FROM THE LIST OF 1857, AND REVISED WITH ADDITIONS AND TIDAL DATA.

From the Report of the Superintendent of the United States Coast Survey.

PLACES.	*Limits between which depths are given.*	LEAST WATER IN CHANNEL WAY. Mean. *Low water.* Feet.	Mean. *High water.* Feet.	Spring tides. *Low water.* Feet.	Spring tides. *High water.* Feet.	*Authorities.*
Portland, Maine,	From Cape Elizabeth to Portland light,	45	53.9	44.5	54.4	C. S., 1850, 1853 and 1854.
	From Portland light to breakwater,[1]	36	44.9	35.5	45.4	
	From breakwater to end of Munjoy Point,	30	38.9	29.5	39.4	
	From breakwater to anchorage,	16	24.9	15.5	25.4	
	Channel-way off town and wharves,	27	35.9	26.5	36.4	
	From Munjoy to rail-road bridge,	19.5	28.4	19	28.9	
Portsmouth, N. H.,	From Whale's back to Fort Constitution,	42	50.6	41.4	51.3	C. S., 1851.
	From Fort Constitution to the Narrows,	51	59.6	50.4	60.3	
	From the Narrows to the city,	45	53.6	44.4	54.3	
	Off the wharves,	63	71.6	62.4	72.3	
Newburyport,	Over bar,	7	14.3	6.6	15.7	C. S., 1857.
Ipswich,	Over bar,	7.5	16.1	6.6	16.8	
Annisquam,	Over bar,	6.5	15.5	5.6	16.4	
Gloucester,	Channel into southeast harbor,	30	38.9	29.1	39.8	C. S., 1854.
	Inner harbor channel to abreast Ten Pound Island light,	31	39.9	30.1	40.8	
	Up into inner harbor,	24	32.9	23.1	33.8	
Salem, Mass.,	Northern ship channel, between Baker's and Misery Islands,	52	61.2	51.3	61.9	C. S., 1850 and 1851.
	Southern ship channel, passing Half-way Rock, &c.,	28	37.2	27.3	37.9	
	Inside of Salem Neck,	19	28.2	18.3	28.9	
Boston, Mass.,	Main ship channel, between Lovel's and Gallop's Islands,	28.5	38.5	27.8	39.1	C. S., 1846, 1847, 1848 and 1853.
	Broad sound, south channel,	19.5	29.5	18.8	30.1	
	President's roads, anchorage,	31.5	41.5	30.8	42.1	
	Main channel, between Governor's Island and Castle Island,	18	28	17.3	28.6	
Plymouth,	Entrance off Gurnet lights,	21	31.2	20.3	31.7	C. S., 1857.
	South of Duxbury pier, in mid channel,	48	58.2	47.3	58.7	

	Up to anchorage inside the pier-head on Long Beach,	14	..	24.2	..	13.3		24.7		
	At anchorage inside the pier-head,	24	..	34.2	.	23.3	..	34.7	C. S., 1857.	
	Anchorage in the Cow Yard,	24	..	34.2	..	23.8	..	34.7		
Narragansett bay to Prudence Island,	Entering with Boston Neck on port hand, Beavertail and Dutch Island lights on starboard hand,	25	..	28.9	..	24.6	..	29.2	Com. Wadsworth, 1832.	
	Entering with Beavertail light on the port and Castle Hill on starboard hand, up to Goat Island,	60	..	63.9	..	59.6	..	64.2		
	Anchorage southward and westward of Goat Island,	33	..	36.9	..	32.6	..	37.2		
	Abreast of wharves inside of Goat Island,	21	..	24.9	..	20.6	..	25.2		
	From Newport harbor, inside of Gull Rocks to Prudence Island,	31	..	34.9	..	30.6	..	35.2	C. S., 1848.	
	To Mount Hope bay,	42	..	45.9	..	41.6	..	46.2		
	To Mount Hope bay, with Cormorant Rock, Sachuest Point on port, and Saughkonnet Point on starboard hand,	20	..	23.9	..	19.6	..	24.2		
New-York,	Gedney's channel,	23	..	27.8	..	22.6	..	28.1		
	Swash channel,	17	..	21.8	..	16.6	..	22.1	C. S., 1855 and 1856.	
	Old South channel,	21	..	25.8	..	20.6	..	26.1		
	Main ship channel, passing Sandy Hook to SW. Spit buoy,	31	..	35.8	..	30.6	..	36.1		
	Main ship channel, after passing SW. Spit buoy on NE. course, one mile up the bay for New-York,	23	..	27.8	..	22.6	..	28.1		
Arthur's Kill,	Anchorage at Perth Amboy,	22	..	26.9	..	21.5	..	27.5		
	From anchorage to Woodbridge wharf,	22	..	26.9	..	21.5	..	27.5		
	From Woodbridge wharf to Rossville,[2]	13.5	..	18.6	..	13.0	..	19.2	C. S., 1855.	
	From Rossville to Chelsea,[3]	14	..	19.1	..	13.5	..	19.7		
	From Chelsea, in the western channel, to Elizabethport,[4]	13	..	18.1	..	12.5	..	18.7		
	From Elizabethport to Shooter's Island,[5]	6.5	..	10.9	..	6.0	..	11.5		
Kill van Kull,	From Shooter's Island to Bergen Point lighthouse,	10	..	14.3	..	9.5	..	14.9		
	From Bergen Point lighthouse to New-Brighton,	27	..	31.3	..	26.5	..	31.9		
Newark Bay,	From Bergen Point lighthouse to the mouth of Hackensack River,[6]	7	..	11.6	..	6.5	..	12.2	C. S., 1855.	
Hudson River,	From Castle Garden to Manhattanville,	32	..	36.0	..	31.6	..	36.8	do.	
	From Manhattanville to Yonkers,	27	..	30.8	..	26.7	..	31.3	do.	
	From Yonkers to Piermont ferry,[7]	39	..	42.6	..	38.7	..	43.0	C. S., 1853.	
	From Piermont Ferry to Sing Sing,[8]	24.5	..	28.0	..	24.3	..	28.3	do.	
	From Sing Sing to Haverstraw,	26	..	29.1	..	25.8	..	29.8	do.	
	From Haverstraw to Peekskill,	27	..	30.1	..	26.8	..	30.8	C. S., 1854.	

HARBORS AND RIVERS OF THE U. S.—(*Continued.*)

Places.	*Limits between which depths are given.*	Least Water in Channel Way. Mean. *Low water.* Feet.	*High water.* Feet.	Spring tides. *Low water.* Feet.	*High water.* Feet.	*Authorities.*
Delaware Bay,.....	Main ship channel, passing Delaware breakwater,[9]	61 ..	64.5 ..	60.4 ..	64.9	
	Off Brandywine lighthouse,.....	43 ..	46.5 ..	42.4 ..	46.9	
	Main ship channel, passing False Liston's tree to abreast of Bombay Hook light,.....	27.5 ..	33.4 ..	27.3 ..	34.2	C. S., from 1840 to 1844, inclusive.
	Blake's Channel, along Flogger Shoal,.....	13.5 ..	19.4 ..	13.3 ..	20.2	
	Blake's Channel, passing Mahon River light,.....	13.5 ..	19.4 ..	13.3 ..	20.2	
	Main ship channel approaching Liston's Point,.....	20 ..	25.9 ..	19.8 ..	26.7	
Delaware River,.....	Main ship channel up to Reedy Island,.....	20 ..	26 ..	19.6 ..	26.3	
	Main ship channel, opposite Reedy Island lighthouse,.....	24.5 ..	30.5 ..	24.1 ..	30.8	
	Opposite Delaware City,.....	30 ..	36 ..	29.6 ..	36.3	
	Up to Christiana Creek light,.....	20.5 ..	27 ..	20.3 ..	27.2	
	Up to Marcus Hook,.....	20.5 ..	27 ..	20.3 ..	27.2	C. S., from 1840 to 1844, inclusive.
	Opposite Chester,.....	24.5 ..	30.7 ..	24.4 ..	31.2	
	Bar off Hog Island,.....	18.5 ..	24.7 ..	18.4 ..	25.2	
	Between Greenwich Point and Gloucester Point,.....	31.5 ..	37.5 ..	31.4 ..	38.2	
	From Greenwich Point up to Philadelphia,.....	21.5 ..	27.5 ..	21.4 ..	28.2	
Chesapeake Bay,.....	From capes at entrance to Hampton Roads,.....	30 ..	32.5 ..	29.8 ..	32.8	
	Anchorage in Hampton Roads,.....	59 ..	61.5 ..	58.8 ..	61.8	
	From Hampton Roads to Sewall's Point,.....	25 ..	27.5 ..	24.8 ..	27.8	
	South of Sewall's Point, (one mile and a half,).....	21 ..	23.5 ..	20.8 ..	23.8	
	Up to Norfolk,.....	23 ..	25.5 ..	22.8 ..	25.8	
	From Hampton Roads to James River, entering to the northward of Newport News middle ground,.....	22 ..	24.5 ..	21.7 ..	24.8	1852, 1853 and 1854.
	From Hampton Roads to James River, entering to the southward of Newport News middle ground,.....	27 ..	29.5 ..	26.7 ..	29.8	
York River, Va.,.....	From abreast the tail of York Spit up to Yorktown,.....	33 ..	35.5 ..	32.7 ..	35.8	
Elizabeth River, Va.,....	Between Norfolk and Navy Yard,.....	25.5 ..	28 ..	25.3 ..	28.3	
Hatteras Inlet, N. C.,....	Entrance,.....	19 ..	21 ..	18.9 ..	21.1	
	Anchorage in Oliver's Channel,.....	13 ..	15 ..	12.9 ..	15.1	1857.
	Over bulkhead into Pamlico Sound,.....	7 ..	9 ..	6.9 ..	9.1	

Ocracoke Inlet,	Over bar,	10	..	12.4	..	8.8	..	12.6	1857.
	Anchorage in Wallico's Channel,	19	..	21.4	..	18.8	..	21.6	1857.
Albemarle Sound,	From light-boat off Caroon's Point to a line joining Powell's Point and Shell Bank, near the mouth of Currituck Sound,	7	..	....	..	....	..	....	1851.
	Thence up the Sound to Martin's Point,	5.5	..	....	..	....	..	....	1851.
	Martin's Point to Trout's Hole, south of Rattlesnake Island,	5	..	....	..	....	..	....	1851.
North River, N. C.,	At entrance, and seven miles up from Albemarle Sound,	6.7	..	....	..	....	..	....	1850.
Beaufort, N. C.	Main ship channel,	15.5	..	18.3	..	15.8	..	18.6	1854.
	Through the Slue,	7	..	9.8	..	6.8	..	10.1	1857.
Cape Fear,	New Inlet Bar,	8	..	12.5	..	7.5	..	13	1857.
	Western Bar,	8	..	12.5	..	7.5	..	13	1857.
Georgetown, S. C.,	Entrance to Winyah Bay, East and Southeast Pass,	7	..	10.8	..	6.7	..	11.3	1851, 1852 and 1858.
	Anchorage inside of North Island,	27	..	30.8	..	26.7	..	31.3	1851, 1852 and 1858.
	Up to Georgetown,	9	..	12.6	..	8.7	..	13.1	1851, 1852 and 1858.
Bull's Bay,	Over bar,	13	..	17.8	..	12.6	..	18.3	1857.
	At anchorage,	21	..	25.8	..	20.6	..	26.3	1857.
Charleston, S. C.,	Main bar,	11	..	16.3	..	10.8	..	17.1	1857.
	North Channel,	10	..	15.3	..	9.8	..	16.1	1857.
	Maffit's Channel,	11	..	16.3	..	10.8	..	17.1	1858.
North Edisto,	East Channel,	11	..	16.8	..	10.5	..	17.4	1856.
	Southeast Channel,	13	..	18.8	..	12.5	..	19.4	1856.
St. Helena Sound,	South Edisto Channel,	14	..	19.9	..	13.3	..	20.7	1856 and 1857.
	Southeast Channel,	10	..	15.9	..	9.3	..	16.7	1856 and 1857.
	South Channel,	17	..	22.9	..	16.3	..	23.7	1856 and 1857.
	East Channel,	8	..	13.9	..	7.3	..	14.7	1856 and 1857.
Port Royal,	East Channel,	16	..	23	..	15.5	..	23.5	1855 and 1856.
	Southeast Channel,	20	..	27	..	19.5	..	27.5	1855 and 1856.
	South Channel,	18	..	25	..	17.5	..	25.5	1855 and 1856.
Tybee Entrance,	Bar near Tybee Island,	19	..	26	..	18.4	..	26.5	1851 and 1852.
	Tybee Roads,	31	..	38	..	30.4	..	38.5	1851 and 1852.
Savannah,	Channel up to city, (Wrecks and Garden Bank,)	11	..	17.5	..	10.6	..	18.2	Capt. Gilmer, U. S. Engineers.—1856.
Doboy Bar, (inlet,)	Entrance over bar,	15.5	..	22.1	..	14.7	..	22.5	1855.
	Anchorage in sound,	24	..	30.6	..	23.2	..	31	1855.
St. Simon's,	Over bar at entrance,	17	..	23.8	..	16.3	..	24.5	1855 and 1856.
	Entrance to sound,	38	..	44.8	..	37.3	..	45.5	1855 and 1856.

HARBORS AND RIVERS OF THE U. S.—(*Continued.*)

Places.	*Places between which depths are given.*	Least Water in Channel Way. Mean. *Low water.* Feet.	*High water.* Feet.	Spring tides. *Low water.* Feet.	*High water.* Feet.	*Authorities.*
	Turtle River up to Blythe Island,	21 ..	27.8 ..	20.3 ..	28.5	1855 and 1856.
St. Mary's,	Main ship channel over bar,	14.5 ..	20.3 ..	14 ..	20.7	1855, 1856 and 1857.
	Channel up to St. Mary's,	19 ..	24.9 ..	18.5 ..	25.2	
St. John's River, Fla.,	Over bar at entrance,	7 ..	11.5 ..	6.4 ..	11.9	1855.
	Channel passing up towards Jacksonville,	23 ..	25.1 ..	22.5 ..	25.5	
Florida Reef,	Approaches to the inside of the reef:					
	Cape Florida lighthouse, bearing W. SW. ¼ W.,	20 ..	21.5 ..	19.9 ..	21.7	
	Entrance to the northward of Fowey Rocks; Soldier Key bearing SW. ¼ W.,	19 ..	20.5 ..	18.9 ..	20.7	1852.
	Entrance to Legaré anchorage,	20 ..	21.5 ..	19.9 ..	21.7	
	Turtle Harbor entrance,	26 ..	27.5 ..	25.9 ..	27.7	
	Channel inside the reefs (Hawk Channel) from entrance off Cape Florida lighthouse to Rodriguez Key,	11 ..	12.5 ..	10.9 ..	12.7	1854.
	Anchorage one mile from Indian Key,	21 ..	22.8 ..	20.7 ..	23.1	
	Bahia Honda Channel, west point of Bahia Honda bearing N. NW.,	18 ..	19.3 ..	17.7 ..	19.5	
	Key Sambo Channel, between Middle and Western Sambo,	34 ..	35.3 ..	33.7 ..	35.5	
	Inside the reef, and steering W. by N. for buoy,	14 ..	15.3 ..	13.7 ..	15.5	
Key West,	Main ship channel to middle buoy on shoals,	27 ..	28.3 ..	26.9 ..	28.5	
	From shoals to anchorage,	30 ..	31.3 ..	29.9 ..	31.5	
	East channel, entering,	30 ..	31.3 ..	29.9 ..	31.5	
	On course N. NW. ½ W., (light on O'Hara's Observatory,) and passing between shoals,	28 ..	29.3 ..	27.9 ..	29.5	
	From 14 feet shoals to anchorage,	30 ..	31.3 ..	29.9 ..	31.5	
	At anchorage,	27 ..	28.3 ..	26.9 ..	28.5	1850 and 1851.
	Rock Key Channel,	20 ..	21.3 ..	19.9 ..	21.5	
	Sand Key Channel,	27 ..	28.3 ..	26.9 ..	28.5	
	West Channel,	30 ..	31.3 ..	29.9 ..	31.5	
	Northwest Channel up to abreast Northwest Light,	15 ..	16.3 ..	14.9 ..	16.5	
	Over Northwest Channel bar,	12 ..	13.3 ..	11.9 ..	13.5	
Tortugas,	Northwest Channel,	45 ..	46.2 ..	44.8 ..	46.4	
	Southwest Channel,	54 ..	55.2 ..	53.8 ..	55.4	

Tampa Bay,	Over bar,	19	..	20.4	..	18.8	.. 20.6	1855.
	Channel between Egmont and Passage Key,	17	..	18.4	..	16.8	.. 18.6	
Waccasassa Bay,	Channel up to anchorage,	8	..	10.6	..	7.7	.. 10.9	1857.
Cedar Keys,	Main channel,	9	..	11.6	..	8.7	.. 11.9	1858.
	Northwest Channel over bar,	11	..	13.6	..	10.7	.. 13.9	1854.
St. Mark's,	Over bar,	9	..	11.2	..	8.7	.. 11.5	1856.
	Channel at middle buoy,	12	..	14.2	..	11.7	.. 14.5	
	In mid-channel, off lighthouse,	15	..	17.2	..	14.7	.. 17.5	
	Up to Fort St. Mark's,	7	..	9.2	..	6.7	.. 9.5	1852.
St. George's Sound,	East entrance over bar,	15.5	..	....	..	....	.. ....	1858.
	Main ship channel,	14	..	....	..	....	.. ....	
	Swash Channel,	13	..	....	..	....	.. ....	
	At anchorage,	19	..	....	..	....	.. ....	
Apalachicola,	Over bar,*	13	..	....	..	....	.. ....	
	In mid-channel, off beacon on St. Vincent's Island,	39	..	....	..	....	.. ....	
	Up to anchorage,	10	..	....	..	....	.. ....	
St. Andrew's Bay,	Main ship channel, over bar,*	13	..	14	..	12.8	.. 14.3	1855.
	Swash Channel, over bar,	7	..	8	..	6.8	.. 8.3	
	West Pass, over bar,	7	..	8	..	6.8	.. 8.3	
Pensacola,	Over bar,*	22.5	..	23.5	..	22.3	.. 23.8	1856.
	From bar to Navy Yard,	27	..	28	..	26.8	.. 28.3	
	Off wharf at Pensacola,	21	..	22	..	20.8	.. 22.3	
Mobile Bay and River,	Over outer bar,*	21	..	22	..	20.7	.. 22.2	1847 to 1852, inclusive.
	Main ship channel to Fort Morgan,	36	..	37	..	35.7	.. 37.2	
	To the upper fleet,	12	..	13	..	11.7	.. 13.2	
	Grant's Pass,*	6.5	..	7.5	..	6.3	.. 7.8	1847.
Mississippi Sound,	From Grant's Pass to Pascagoula mail wharf,*	7.5	..	8.7	..	7.2	.. 9	1851.
	Horn Island Pass, over bar,	15	..	16.2	..	14.7	.. 16.5	1853.
	Anchorage inside Horn Island,	19	..	20.2	..	18.7	.. 20.5	1852 and 1853.
	Up to Pascagoula mail wharf,	8	..	9.2	..	7.7	.. 9.5	
Ship Island Harbor,	Channel,*	19	..	20.3	..	18.7	.. 20.6	1848.
	Northwest Channel,	19.5	..	20.8	..	19.2	.. 21.1	
	Anchorage, Man-of-war Harbor,	18	..	19.3	..	17.7	.. 19.6	
Cat Island Harbor,	Ship channel,*	16	..	17.3	..	15.7	.. 17.6	1848.
	South Pass,	14	..	15.3	..	13.7	.. 15.6	
	Shell Bank Channel,	15.2	..	16.5	..	14.9	.. 16.8	

HARBORS AND RIVERS OF THE U. S.—(*Continued.*)

Places.	*Limits between which depths are given.*	Least Water in Channel Way.				*Authorities.*
		Mean.		Spring tides.		
		Low water.	*High water.*	*Low water.*	*High water.*	
		Feet.	*Feet.*	*Feet.*	*Feet.*	
Mississippi Delta,	Pass à l'Outre, North Channel,*	9.5	10.6	9.3	10.7	
	South Channel,	12	13.1	11.8	13.2	
Northeast Pass,	Over bar, north entrance,*	9.5	10.6	9.3	10.7	
	Over bar, south entrance,	9	10.1	8.8	10.2	1851 and 1852.
Southeast Pass,	Entering,*	10	11.1	9.8	11.2	
South Pass,	Channel,*	8	9.1	7.8	9.2	
Southwest Pass,	Channel,*	13	14.1	12.8	14.2	
Barrataria Bay,	Over bar outside of Grand Pass,*	7.5	8.7	7.2	8.9	
	Grand passage to Independence Island,	15	16.2	14.7	16.4	1853.
Dernière or Last Island,	Channel inside, and north of Ship Island Shoal light ship,*	27	28.4	26.7	28.8	1853.
	Channel north of Ship Island Shoal, one mile from Dernière Island,	14	15.4	13.7	15.8	1853.
Atchafalaya Bay,	From entrance to Cut-off Channel buoy,*	8	9.6	7.6	10.0	
	On the Narrows,	6.5	8.1	6.1	8.5	1858.
	On bulkhead,	6.5	8.1	6.1	8.5	
	Mouth of Atchafalaya River, in mid-channel,	48	49.6	47.6	50.0	
Vermillion Bay,	Over bar,*	5.5	7.4	5.3	7.6	1855.
	In mid-channel, off lighthouse,*	42	43.6	41.6	44	
Calcasieu River,	Entrance over bar,*	5.5	7.4	5.3	7.6	1855.
Sabine Pass,	Across the bar,*	7.5	9	7.2	9.3	1853.
Galveston Bay,	Entrance over bar,*	12	13.1	11.7	13.3	1853.
San Luis Pass,	Over bar,*	8	9.1	7.8	9.3	1853.
Brazos River,	Over bar,*	8	9.1	7.8	9.3	1853.
Matagorda Bay,	Entrance over bar,*	9	10.1	8.8	10.3	1857.
Aransas Pass,	Aransas Pass,*	9	10.1	8.7	10.5	1853.
Rio Grande,	Channel,*	4	4.9	3.8	5	1853.

* The highest tides occur at the moon's greatest declination, and are applied in the column headed "spring tides."

Places.	Limits between which depths are given.	Least Water in Channel Way. Mean, lowest of day. Low Water. Feet.	Mean, lowest of day. High Water. Feet.	Spring tides, lowest of day. Mean. Low Water. Feet.	Spring tides, lowest of day. Mean. High Water. Feet.	Spring tides, lowest of day. Moon's greatest declination. Low Water. Feet.	Spring tides, lowest of day. Moon's greatest declination. High Water. Feet.	Date.
San Diego Bay,.....	Entrance,.....	27.4 ..	31.5 ..	26.8 ..	32.1 ..	26.3 ..	31.8 ..	1851.
San Diego,.....	Midway between south end of Zuniga Shoal and Point Loma lighthouse, bearing N. 61⅛ W. by compass,.....	20 ..	24.1 ..	19.4 ..	24.7 ..	18.9 ..	24.4 ..	1856.
	Middle Ground lighthouse, bearing N. 67½ W. by compass, distant three-fourths of a statute mile,.....	18 ..	22.1 ..	17.4 ..	22.7 ..	16.9 ..	22.4 ..	1856.
	Midway and nearly in range between Ballast Point and point opposite,.....	22 ..	26.1 ..	21.4 ..	26.7 ..	20.9 ..	26.4 ..	1856.
	Abreast of La Plaza, 160 yards from shore,.....	18 ..	22.1 ..	17.4 ..	22.7 ..	16.9 ..	22.4 ..	1856.
	At end of wharf, (Newtown,).....	23 ..	27.1 ..	22.4 ..	27.7 ..	21.9 ..	27.4 ..	1856.
San Clemente Island, (SE. end,)	About midway between NE. and SW. points at anchorage in deepest bight, 450 yards from shore,.....	40 ..	44.1 ..	39.4 ..	44.7 ..	38.9 ..	44.4 ..	1856.
San Clemente Island, (NW. end,)	About 200 yards from shore at anchorage,.....	36 ..	40.1 ..	35.4 ..	40.7 ..	34.9 ..	40.4 ..	1852.
Mission San Juan Capistrano,	At anchorage,.....	42 ..	46.1 ..	41.4 ..	46.7 ..	40.9 ..	46.4 ..	1853.
Santa Catalina Island, (SW. side,)	Anchorage in Catalina harbor,.....	21 ..	25.0 ..	20.5 ..	25.5 ..	19.9 ..	25.1 ..	1852.
San Pedro,.....	In range between Pt. Pedro and half a mile from Dead Man's Is.	18 ..	22.0 ..	17.5 ..	22.5 ..	16.9 ..	22.1 ..	1852.
Point Duma,.....	Anchorage,.....	54 ..	58.0 ..	53.5 ..	58.5 ..	52.9 ..	58.1 ..	1853.
San Buenaventura,.....	At anchorage half a mile from shore,.....	36 ..	40.1 ..	35.5 ..	40.9 ..	35.0 ..	40.4 ..	1855.
Santa Cruz Island,.....	Anchorage, Prisoner's harbor,.....	75 ..	79.1 ..	74.5 ..	79.9 ..	74.0 ..	79.4 ..	1852.
Santa Barbara,.....	Anchorage inside of kelp, 450 yards from shore,.....	18 ..	22.1 ..	17.5 ..	22.9 ..	17.0 ..	22.4 ..	1852.
San Miguel Island,.....	Anchorage, Cuyler's harbor,.....	37 ..	41.1 ..	36.5 ..	41.9 ..	36.0 ..	41.4 ..	1852.
Coxo harbor,.....	Anchorage,.....	30 ..	34.1 ..	29.5 ..	34.9 ..	29.0 ..	34.4 ..	1852.
San Louis Obispo,.....	Anchorage in harbor,.....	33 ..	36.9 ..	32.3 ..	37.4 ..	31.7 ..	37.1 ..	1852.
San Simeon,.....	Harbor anchorage,.....	24 ..	27.9 ..	23.3 ..	28.4 ..	22.7 ..	28.1 ..	1852.
Monterey harbor,.....	Anchorage,.....	42 ..	45.9 ..	41.5 ..	46.2 ..	40.9 ..	45.8 ..	1852.
	Near shore,.....	30 ..	33.9 ..	29.5 ..	34.2 ..	28.9 ..	33.8 ..	1852.
Santa Cruz harbor,.....	Anchorage,.....	27 ..	30.9 ..	26.5 ..	31.2 ..	25.9 ..	30.8 ..	1852.

HARBORS AND RIVERS OF THE U. S.—(*Continued.*)

Places.	*Limits between which depths are given.*	Least Water in Channel Way. Mean, lowest of day. *Low Water.* Feet.	Mean, lowest of day. *High Water.* Feet.	Spring tides, lowest of day. Mean. *Low Water.* Feet.	Spring tides, lowest of day. Mean. *High Water.* Feet.	Spring tides, lowest of day. Moon's greatest declination. *Low Water.* Feet.	Spring tides, lowest of day. Moon's greatest declination. *High Water.* Feet.	*Date.*
San Francisco bay,	From 4 fathom bank around to southern shore,	28	32.2	27.6	32.6	26.9	32.4	1851.
	Anchorage off Rincon Point, 450 yards from shore,	66	70.2	65.6	70.6	64.9	70.4	1851.
	Anchorage off Market-street wharf, San Francisco,	54	58.2	53.6	58.6	52.9	58.4	1851.
	Off Cunningham's wharf,	36	40.2	35.6	40.6	34.9	40.4	1851.
	Off Clark's point, 450 yards from shore,	42	46.2	41.6	46.6	40.9	46.4	1851.
San Francisco harbor,	On the bar,	33	37.2	32.6	37.6	31.9	37.4	1855.
	At best wharves,	20	24.2	19.6	24.6	18.9	24.4	1855.
Mare Island Straits,	In mid channel, between Commission Rock and western shore,	25	30.5	24.8	30.7	24.0	30.3	1856.
	In mid channel, between Navy Yard and Vallejo,	25	30.5	24.8	30.7	24.0	30.3	1856.
Ballenas Bay,	Inside of breakers on Duxbury reef, about a mile from shore,	24	28.2	23.6	28.6	22.9	28.4	1858.
Sir Francis Drake's Bay,	Half a mile inside the point, and 400 yards from shore,	17	21.2	16.6	21.6	15.9	21.4	1855.
Bodega Bay,	Half a mile inside of reef, anchorage, 900 yards from shore,	36	40.0	35.4	40.7	34.8	40.4	1858.
Coast,	At Haven's anchorage,	48	52.5	47.5	52.9	46.8	52.7	1858.
Albion River,	Anchorage at entrance,	48	52.5	47.5	52.9	46.8	52.7	1858.
Mendocino City,	Anchorage inside of point,	30	34.5	29.5	34.9	28.8	34.7	1858.
Shelter Cove,	Anchorage 500 yards inside of point,	22	26.5	21.5	26.9	20.8	26.7	1858.
Humboldt Bay,	On bar, half a mile from shore,	21	25.8	20.4	26.4	19.7	26.1	1858.
	Main channel,	20	24.8	19.4	25.4	18.7	25.1	1851.
Crescent City harbor,	Anchorage half a mile off Crescent City,	21	26.2	20.4	26.9	19.7	26.5	1858.
Port Orford, or Ewing harbor,	Anchorage three-fourths of a mile from Tichenor's Rock,	46	51.7	45.4	52.4	44.7	52.0	1858.
Umpquah River,	On bar, opposite mid-channel,	18	19.1	12.4	19.6	11.7	19.3	1858.
Columbia River,	North Channel to Baker's Bay,	24	30.5	23.4	30.9	22.7	30.6	1852.
	Entrance into South Channel,*	19	25.5	18.4	25.9	17.7	25.6	1852.
	On bar of South Channel,	16	22.5	15.4	22.9	14.7	22.6	1858.
Shoalwater Bay,	On bar,	18	24.5	17.1	25	16.4	24.5	1851.

* Twenty-one feet may be carried in at mean low water by keeping a little northward and westward, nearer the breakers of the middle sands, and, at the turn, hauling up for Cape Disappointment.

	North Channel,.....	22.5	..	29	..	21.6	..	29.5	..	20.9	..	29	..	....
	South Channel,.....	25	..	31.5	..	24.1	..	32	..	23.4	..	31.5	..	1853.
Grenville harbor,.....	Anchorage three-quarters of a mile inside of Point Grenville, and same distance from shore,.....	22	..	28.5	..	21.1	..	29	..	20.4	..	28.5	..	1854.
Neé-ah harbor,.....	Anchorage a mile inside of Waddah Island, and 450 yards from shore,.....	36	..	42.4	..	34.8	..	43.0	..	34.1	..	42.5	..	1851.
False Dungeness,.....	Harbor anchorage,.....	54	..	60.4	..	53.1	..	60.9	..	52.2	..	60.8	..	1853.
New Dungeness,.....	Harbor anchorage,.....	45	..	51.4	..	44.1	..	51.7	..	43.2	..	51.8	..	1855.
Smith's Island, (north side,).	Anchorage near kelp, 450 yards from shore,.....	25	..	31.4	..	24.4	..	31.7	..	23.3	..	32.2	..	1854.
Bellingham Bay,.....	.....	60	..	67	..	59.4	..	67.4	..	58.1	..	68	..	1855.
	Anchorage 400 yards southwest of Fitzhugh's wharf,.....	18	..	25	..	17.4	..	25.4	..	16.1	..	26	..	1855.
Port Townshend,.....	Anchorage 400 yards east of Custom House,.....	48	..	54.4	..	47.4	..	54.7	..	46.3	..	55.2	..	1854.
Port Ludlow,.....	Anchorage,.....	36	..	45.2	..	37.2	..	45.8	..	34.2	..	46.4	..	1855.
Port Gamble,.....	Anchorage,.....	18	..	27.2	..	17.2	..	27.8	..	16.2	..	28.4	..	1855.
Seattle,.....	Anchorage,.....	20	..	29.2	..	18.2	..	29.8	..	18.2	..	30.4	..	1854.
Blakely harbor,.....	Anchorage 450 yards inside of entrance,.....	46	..	55.2	..	45.2	..	55.8	..	44.2	..	56.4	..	1856.
Steilacoom harbor,.....	Anchorage off Steilacoom creek, 400 yards,.....	18	..	30.0	..	17.0	..	30.9	..	16.1	..	31.7	..	1855.
Olympia harbor,.....	Mid channel, town 1¼ miles distant, mission bearing E.NE.,.	11	..	23	..	10	..	23.9	..	9.1	..	24.7	..	....

In passing from New-York to an eastern port, the first great change in the tides and tidal currents is between the East River and Long Island Sound; the difference between Governor's Island and Negro Point on Ward's Island, at the eastern entrance to Hell Gate, is two hours and forty-five minutes. Between this point and Throg's Point the change is small. The mariner is now in the full tide of the Sound, and between Throg's Point and Fisher's Island there is a difference of time of but two hours and twenty minutes, the greatest part of which is at the head of the Sound and at its entrance—that is, near Throg's Point and Fisher's Island. From off New-London to off Sand's Point the difference is but one hour and forty minutes; so that if the mariner, instead of remaining at Throg's Point, passes onward to Fisher's Island, he would lose but half a tide in the whole passage.

[1] The depth in channel way varies between 6 and 8½ fathoms. [2] Two bars, each a quarter of a mile, have a less depth than 18 feet. [3] A small shoal, with 12 feet, lies in the middle of the kill, opposite the wharf at Blazing Star; and another, with 10 feet, a quarter of a mile to the northward; but deeper water is found on east side of both. [4] A shoal, of 4 feet, obstructs the eastern channel, half way between Chelsea and its junction with the main channel. [5] Channel very narrow in the vicinity of Black Beacon. [6] From Bergen Point light, half way to Newark Bay lighthouse, 17 feet may be carried. [7] In a straight line. [8] A shoal of 21.5 feet occurs about a mile below Sing Sing. [9] Soundings varying between 10 and 15 fathoms.

SHIP-BUILDING AND TONNAGE OF NEW-YORK.

In order to illustrate more fully the foreign commerce of the State of New-York, the following table will show what proportion of vessels entered these ports, compared with all others in the Union:

I. STATEMENT EXHIBITING THE NUMBER OF AMERICAN AND FOREIGN VESSELS, WITH THEIR TONNAGE AND CREWS, WHICH ENTERED INTO THE SEVERAL DISTRICTS OF THE STATE OF NEW-YORK FROM FOREIGN COUNTRIES, DURING THE FISCAL YEAR ENDING JUNE 30, 1860.

ENTERED INTO	AMERICAN VESSELS.			FOREIGN VESSELS.			TOTAL.		
	No.	*Tons.*	*Men.*	*No.*	*Tons.*	*Men.*	*No.*	*Tons.*	*Men.*
Sackett's Harb., N.Y.,	132	98,651	4,005	...	...	...	132	98,651	4,005
Genesee, "	133	79,132	2,711	229	48,757	3,176	362	127,889	5,887
Oswego, "	691	230,547	6,032	1,817	214,900	11,577	2,508	445,447	17,609
Niagara, "	31	1,997	182	287	84,399	4,333	318	86,396	4,515
Buffalo, "	1,446	1,301,674	16,503	649	60,560	3,605	2,095	1,362,234	20,108
Oswegatchie, "	171	136,566	5,130	173	25,136	3,383	344	161,702	8,513
Sag Har. & Dunkirk,	30	1,140	100	16	638	67	46	1,778	167
New-York, "	2,645	1,356,665	41,495	1,337	617,147	25,238	3,982	1,973,812	66,733
Champlain, "	278	17,631	600	301	22,959	1,008	579	40,590	1,609
Cape Vincent, "	527	424,325	15,214	425	118,124	6,968	952	537,949	22,182
Total State of N. Y.,	6,084	3,648,828	91,922	5,234	1,187,620	59,405	11,318	4,836,448	151,327
" all other ports,	6,122	2,272,457	76,879	5,491	1,166,291	47,166	11,613	3,438,748	124,045
Total U. S., 1859-60,	12,206	5,921,285	168,801	10,725	2,353,911	106,571	22,931	8,275,196	275,372
" " 1858-59,	12,085	5,265,648	155,698	10,582	2,540,887	109,989	22,567	7,806,035	265,687
" " 1857-58,	10,735	4,395,642	141,897	10,037	2,209,403	102,476	20,772	6,605,045	244,373
" 1856-57,	11,304	4,721,870	161,062	11,024	2,464,946	116,797	22 328	7,186,816	277,859
" " 1855-56,	10,307	4,385,484	148,189	11,375	2,486,769	118,984	21,682	6,872,253	267,173
" " 1854-55,	9,315	3,861,391	137,251	10,012	2,083,948	99,891	19,327	5,945,339	237,142

II. STATEMENT SHOWING THE NUMBER AND CLASS OF VESSELS BUILT, AND THE TONNAGE THEREOF, IN THE STATE OF NEW-YORK, DURING THE YEAR ENDING JUNE 30, 1860.

DISTRICTS.	*Ships and Barks.*	*Brigs.*	*Schooners.*	*Sloops and Canal Boats.*	*Steamers.*	*Total built.*	*Total tonnage.*
Champlain,	..	..	..	..	..	..	..
Sackett's Harbor,	..	..	..	..	..	..	..
Oswego,	..	..	10	22	..	32	3,987
Niagara,	..	..	1	..	..	1	116
Genesee,	..	..	..	..	..	..	..
Oswegatchie,	..	..	..	..	..	..	..
Buffalo,	..	..	2	11	10	23	3,786
Sag Harbor,	..	1	..	..	..	1	150
Greenport,	..	..	3	..	..	3	381
Dunkirk,	..	..	..	..	..	..	..
New-York,	4	2	15	92	28	141	23,484
Cold Spring,	..	..	..	..	..	..	..
Cape Vincent,	..	..	..	..	..	..	..
Total, 1859-60,	4	3	31	125	38	201	31,906
" 1858-59,	2	..	14	64	27	107	16,313
" 1857-58,	7	3	47	94	42	203	37,185
" 1856-57,	28	5	76	83	45	237	67,826
" 1855-56,	24	7	87	161	27	306	76,301
" 1854-55,	45	7	98	356	48	554	115,231

III. Statement showing the number and class of Vessels built, and the Tonnage thereof, in the several States and Territories of the United States, from 1815 to June 30, 1860, inclusive.

Years.	*Ships and Barks.*	*Brigs.*	*Schooners.*	*Sloops and Canal Boats.*	*Steamers.*	*Total built.*	*Total tonnage.*
1815,....	136	224	681	274	..	1,315	154,624
1816,....	76	122	781	424	..	1,403	181,668
1817,....	34	86	559	394	..	1,073	86,393
1818,....	58	85	428	332	..	898	82,421
1819,....	58	82	473	242	..	850	79,817
1820,....	21	60	301	152	..	524	47,784
1821,....	48	89	247	127	..	507	55,856
1822,....	64	131	260	168	..	623	75,346
1823,....	55	127	260	165	15	622	75,007
1824,....	56	156	377	166	26	781	90,939
1825,....	56	197	538	163	35	994	114,997
1826,....	71	187	482	227	45	1,012	126,428
1827,....	55	158	464	241	33	934	103,342
1828, ...	78	108	474	196	33	884	93,375
1829,....	44	68	485	145	43	785	77,098
1830,....	25	56	408	116	37	637	58,094
1831,....	72	95	416	94	34	711	85,963
1832,....	132	148	568	122	100	1,065	144,589
1833,....	144	169	625	185	65	1,188	161,626
1834,....	98	94	497	180	68	937	118,330
1835,....	25	50	301	100	30	507	46,238
1836,....	98	65	444	164	124	890	113,627
1837,....	67	72	507	168	135	949	122,987
1838,....	66	79	501	153	90	898	113,135
1839,....	83	89	489	122	125	858	120,989
1840,....	97	109	378	224	64	872	118,309
1841,....	114	101	310	157	78	762	118,893
1842,....	116	91	273	404	137	1,021	129,083
1843,....	58	84	138	173	79	482	43,617
1844,....	73	47	204	279	163	766	103,537
1845,....	124	87	322	342	163	1,038	146,018
1846,....	100	164	576	355	225	1,420	188,203
1847,....	151	168	689	392	198	1,598	243,732
1848,....	254	174	701	547	175	1,851	318,075
1849,....	198	143	623	370	208	1,547	256,577
1850,....	247	117	547	290	159	1,360	272,218
1851,....	211	65	522	326	233	1,367	298,203
1852,....	255	79	584	267	259	1,444	351,493
1853,....	269	95	681	394	271	1,710	425,572
1854,....	334	112	661	386	281	1,774	535,616
1855,....	381	126	605	669	253	2,034	583,459
1856,....	306	103	594	479	221	1,703	469,393
1857,....	251	58	504	358	263	1,434	378,804
1858, ...	122	46	431	400	226	1,225	242,286
1859,....	89	28	297	284	172	870	156,601
1860,....	110	86	372	289	264	1,071	212,892

IV. Vessels and Tonnage cleared from the District of New-York.

	American.		Foreign.		Total.	
Fiscal Years.	*Vessels.*	*Tonnage.*	*Vessels.*	*Tonnage.*	*Vessels.*	*Tonnage.*
1826,.....	....	208,202 ..	....	19,655 ..	....	227,857
1830,.....	....	210,535 ..	....	32,620 ..	....	243,155
1835,.....	1,226 ..	289,268 ..	433 ..	77,121 ..	1,659 ..	366,389
1840,.....	1,067 ..	283,149 ..	503 ..	125,619 ..	1,570 ..	408,768
1845,.....	1,127 ..	341,094 ..	561 ..	142,431 ..	1,688 ..	483,525
1850,.....	1,379 ..	596,812 ..	1,230 ..	385,666 ..	2,609 ..	982,478
1855,.....	1,941 ..	1,091,244 ..	1,169 ..	354,510 ..	3,110 ..	1,445,754
1857,.....	2,307 ..	1,310,875 ..	1,047 ..	445,566 ..	3,354 ..	1,756,441
1858,.....	1,901 ..	1,027,390 ..	936 ..	433,608 ..	2,837 ..	1,460,998
1859,.....	1,911 ..	925,528 ..	1,175 ..	550,751 ..	3,086 ..	1,476,279
1860,.....	2,026 ..	1,056,486 ..	1,376 ..	622,419 ..	3,402 ..	1,678,905

V. STATEMENT EXHIBITING THE NUMBER OF AMERICAN AND FOREIGN VESSELS, WITH THEIR TONNAGE AND CREWS, WHICH ENTERED INTO THE DISTRICT OF NEW-YORK, AND THE COUNTRIES FROM WHENCE THEY ARRIVED, DURING THE YEAR ENDING JUNE 30, 1860.

ENTERED FROM	AMERICAN VESSELS.			FOREIGN VESSELS.			TOTAL.		
	No.	Tons.	Men.	No.	Tons.	Men.	No.	Tons.	Men.
Russia on the North,	7	4,584	125	..	..	..	7	4,584	125
Prussia,	..	..	..	1	310	10	1	310	10
Sweden and Norway,	2	1,099	26	1	251	9	3	1,350	35
Swedish West Indies,	3	452	17	1	122	6	4	574	23
Danish West Indies,	7	1,373	58	4	1,570	47	11	2,943	105
Hamburg,	2	1,584	40	42	56,951	2,467	44	58,535	2,507
Bremen,	..	..	..	64	57,972	2,102	64	57,972	2,102
Holland,	14	10,370	260	15	8,781	254	29	19,151	514
Dutch West Indies,	43	8,749	325	5	899	38	48	9,648	363
Dutch East Indies,	4	2,074	70	..	..	..	4	2,074	70
Belgium,	18	15,523	347	2	1,453	42	20	16,976	389
England,	357	384,188	8,725	149	219,199	9,389	506	603,367	18,114
Scotland,	26	16,810	427	45	34,542	1,377	71	51,352	1,804
Ireland,	1	1,115	24	12	20,926	1,065	13	22,041	1,089
Gibraltar,	2	425	15	4	794	32	6	1,219	47
Malta,	..	..	..	1	219	8	1	219	8
Canada,	4	1,078	32	3	385	18	7	1,463	50
Other British N. Am. Poss.,	60	11,098	405	414	68,363	2,711	474	79,461	3,116
British West Indies,	168	34,858	1,334	140	25,228	1,077	308	60,081	2,411
British Honduras,	12	3,782	128	..	..	..	12	3,782	128
British Guiana,	8	2,613	88	2	340	15	10	2,953	103
British Possessions in Africa,	9	2,185	81	5	978	40	14	3,163	121
British Australia,	6	1,469	51	..	..	..	6	1,469	51
British East Indies,	31	29,384	711	3	1,740	45	34	31,124	756
France on the Atlantic,	94	124,589	4,260	18	6,762	216	112	131,351	4,476
France on Mediterranean,	18	7,205	209	26	9,410	308	44	16,615	517
French North Amer'n Poss.,	..	..	..	7	887	58	7	887	58
French West Indies,	1	173	6	5	690	49	6	863	55
Spain on the Atlantic,	12	3,635	113	2	484	18	14	4,119	131
Spain on the Mediterranean,	37	9,965	324	24	4,896	149	61	14,861	523
Canary Islands,	8	2,342	73	2	480	19	10	2,822	92
Philippine Islands,	18	19,584	458	1	804	22	19	20,388	475
Cuba,	840	308,571	10,526	85	28,032	1,206	925	336,603	11,732
Porto Rico,	154	31,715	1,230	55	10,245	404	209	51,960	1,634
Portugal,	..	..	..	11	2,556	98	11	2,556	98
Azores,	1	699	23	1	197	8	2	896	31
Madeira,	1	259	7	..	..	..	1	259	7
Sardinia,	5	1,627	56	7	3,087	119	12	4,714	175
Tuscany,	23	18,718	438	4	2,241	60	27	20,954	498
Papal States,	..	..	..	1	170	8	1	170	8
Two Sicilies,	44	15,146	458	38	12,124	473	82	27,270	931
Austria,	6	2,460	79	13	3,730	123	19	6,190	202
Greece,	1	248	8	6	1,241	48	7	1,489	56
Turkey in Asia,	4	1,109	44	6	3,302	102	10	4,411	146
Egypt,	1	299	9	3	659	27	4	958	36
Other ports in Africa,	19	6,062	197	2	499	18	21	6,561	215
Hayti,	90	16,053	675	20	3,002	132	110	19,055	807
San Domingo,	17	3,148	124	23	4,056	182	40	7,204	306
Mexico,	55	17,341	568	5	1,643	43	60	18,984	611
Central Republic,	6	1,116	42	3	516	22	9	1,632	64
New-Granada,	100	97,930	4,401	5	1,236	42	105	99,166	4,443
Venezuela,	47	10,230	393	9	1,762	73	56	11,992	466
Brazil,	137	38,701	1,305	36	9,297	337	173	47,998	1,642
Uruguay, or Cisplatine Rep.,	10	3,463	113	..	..	..	10	3,463	113
Buenos Ayres, or Arg. Rep.,	40	13,914	430	1	293	10	41	14,207	440
Chili,	6	3,750	94	..	..	..	6	3,750	94
Peru,	10	10,675	229	..	..	..	10	10,675	229
Sandwich Islands,	3	1,072	34	2	448	17	5	1,520	51
Other Islands in the Pacific,	3	2,194	55	..	..	..	3	2,194	55
China,	50	47,934	1,230	3	1,380	45	53	49,314	1,275
Total 1859–60,	2,645	1,356,665	41,495	1,337	617,147	25,238	3,982	1,973,812	66,733
" 1858–59,	2,657	1,320,290	40,011	1,245	569,854	23,623	3,902	1,890,144	63,634
" 1857–58,	2,401	1,273,788	39,666	929	420,481	17,183	3,330	1,694,219	56,849
" 1856–57,	3,014	1,584,764	49,759	1,054	450,885	18,028	4,068	2,035,649	67,787
" 1855–56,	2,496	1,381,726	..	1,033	299,933	..	3,529	1,681,659	..
" 1854–55,	2,588	1,377,738	41,983	1,185	358,169	13,263	3,773	1,735,907	55,246

VI. The increase in the amount of tonnage employed in steam navigation since 1848, and owned in the District of New-York, exhibited in the following table:

Years.	Registered.		Enrolled and Licensed.		Total.	
	Tons.	*95ths.*	*Tons.*	*95ths.*	*Tons.*	*95ths.*
1848,	6,523	73	57,705	41	64,229	19
1849,	10,642	76	61,175	92	71,818	73
1850,	36,148	47	58,967	9	85,115	56
1851,	52,392	68	69,148	89	121,541	62
1852,	63,860	33	77,063	84	140,924	22
1853,	76,851	78	88,311	53	165,163	36
1854,	82,607	73	101,487	41	184,095	19
1855,	89,105	9	107,692	88	196,798	2
1856,	68,777	26	107,820	67	176,597	93
1857,	69,051	67	111,526	89	180,578	61
1858,	65,594	89	118,638	88	184,233	82
1859,	70,897	52	120,498	09	191,395	61
1860,	72,929	55	132,580	77	205,510	37

VII. Recapitulation of the number and class of Vessels built in each State of the Union during the fiscal year ending June 30, 1860. (*Official.*)

States and Territories.	Class of Vessels.					Total built.	Total tonnage.
	Ships and barks.	*Brigs.*	*Schoon-ers.*	*Sloops and canal boats.*	*Steam-ers.*		
Maine,	43	20	95	2	2	172	57,867
New-Hampshire,	4	..	..	1	..	5	3,808
Vermont,	..	..	..	2	..	2	110
Massachusetts,	30	2	91	2	7	132	33,461
Rhode Island,	2	1	..	..	1	4	1,395
Connecticut,	6	1	15	9	4	35	7,758
New-York,	4	3	31	125	38	201	31,936
New-Jersey,	..	..	20	17	1	38	4,264
Pennsylvania,	1	2	16	68	65	152	21,615
Delaware,	..	..	7	1	6	14	5,826
Maryland,	8	6	24	2	3	43	7,798
District of Columbia,	..	..	..	36	..	36	2,458
Virginia,	1	1	3	4	17	26	4,372
North Carolina,	..	..	9	5	3	17	864
South Carolina,	..	..	1	..	1	2	72
Georgia,	..	..	..	..	4	4	667
Florida,	..	..	2	..	1	3	255
Alabama,	..	..	3	..	5	8	1,189
Mississippi,	..	..	5	1	1	7	826
Louisiana,	..	..	4	..	8	12	1,500
Tennessee,	..	..	..	..	5	5	433
Kentucky,	..	..	..	..	29	29	8,631
Missouri,	..	..	..	..	13	13	4,081
Illinois,	..	..	..	..	..	..	....
Ohio,	..	..	5	3	32	40	6,192
Wisconsin,	..	..	1	..	1	2	96
Michigan,	1	..	6	8	8	23	2,903
Texas,	..	..	14	1	1	16	1,006
California,	..	..	20	2	3	30	2,023
Oregon,	..	..	..	..	..	..	....
Washington Territory,	..	..	..	..	..	..	....
Total, 1859–60,	110	36	372	289	264	1,071	212,892
" 1858–59,	89	28	297	284	172	870	156,602
" 1857–58,	122	46	431	400	226	1,225	242,286
" 1856–57,	251	58	504	358	263	1,434	378,804
" 1855–56,	306	103	594	479	221	1,703	469,393
" 1854–55,	381	126	605	669	243	2,024	583,450

VIII. STATEMENT OF THE VESSELS CLEARED FROM THE SEVERAL STATES FOR FOREIGN COUNTRIES, DURING THE FISCAL YEAR ENDING JUNE 30, 1860.

STATES.	AMERICAN VESSELS.				FOREIGN VESSELS.				TOTAL AMERICAN AND FOREIGN.			
	Number.	Tons.	Crews.		Number.	Tons.	Crews.		Number.	Tons.	Crews.	
			Men.	Boys.			Men.	Boys.			Men.	Boys.
New-York,	5,460	3,383,535	89,858	1,327	5,188	1,190,750	59,198	581	10,648	4,574,285	149,056	1,908
Maine,	825	205,107	6,790	13	602	103,974	5,678	4	1,427	309,081	12,468	17
New-Hampshire,	5	1,676	41	..	58	5,312	283	8	63	6,988	324	8
Vermont,	183	9,929	540	..	164	13,531	607	..	347	23,460	1,147	..
Massachusetts,	1,969	312,817	12,379	44	2,709	434,092	18,559	75	3,778	746,909	30,938	119
Rhode Island,	57	11,292	438	6	65	12,114	464	..	122	23,406	902	6
Connecticut,	102	18,633	959	32	77	13,554	525	..	179	32,187	1,484	32
New-Jersey,	20	6,516	188	5	16	2,511	95	..	36	9,027	283	5
Pennsylvania,	340	103,045	3,489	..	163	39,298	1,384	..	503	142,343	4,873	..
Delaware,	12	2,169	86	..	3	414	21	..	15	2,583	107	..
Maryland,	385	115,733	3,928	..	208	58,267	2,208	..	593	174,000	6,136	..
District of Columbia,	..	..	..	..	2	275	12	..	2	275	12	..
Virginia,	180	59,611	1,854	..	88	20,770	760	..	268	80,381	2,614	..
North Carolina,	185	28,000	1,230	2	38	8,707	325	..	223	36,707	1,555	2
South Carolina,	269	133,802	4,010	..	142	49,451	1,844	..	411	183,253	5,854	..
Georgia,	212	108,123	2,815	..	124	61,649	1,870	4	336	169,772	4,685	4
Alabama,	245	186,547	3,826	525	98	68,840	1,825	257	343	255,387	5,651	782
Florida,	402	85,373	3,674	..	54	11,616	555	2	456	96,989	4,229	2
Louisiana,	958	713,588	18,378	..	335	180,765	5,700	..	1,293	894,353	24,078	..
Texas,	70	34,205	904	..	38	14,558	483	2	108	48,763	1,387	2
Ohio,	166	26,671	1,129	..	222	25,246	1,292	..	388	51,917	2,421	..
Michigan,	939	187,042	7,600	..	341	249,709	7,166	..	1,280	436,751	14,766	..
Illinois,	130	61,282	1,868	..	24	6,670	229	..	154	67,952	2,097	..
Wisconsin,	78	49,497	1,642	..	8	2,006	72	..	86	51,503	1,714	..
California,	371	302,285	10,402	..	143	49,638	2,154	..	514	351,923	12,556	..
Oregon,	19	19,446	768	..	2	288	34	..	21	19,734	797	..
Total cleared 1859–60,	12,682	6,165,924	178,791	1,954	10,912	2,624,005	113,348	983	23,594	8,789,929	292,134	2,887
Total entered 1859–60,	12,206	5,921,285	168,801	1,299	10,725	2,353,911	106,571	971	22,931	8,275,196	275,372	2,270

IX. The following statements from the annual reports of the Secretary of the United States Treasury exhibits the registered, enrolled and licensed tonnage, and the total tonnage belonging to the district of New-York, in each decennial year from 1825:

	Registered.		*Enrolled and Licensed.*		*Total.*	
Years.	Tons.	95ths.	Tons.	95ths.	Tons.	95ths.
1825,....	156,728 ..	14 ..	147,756 ..	8 ..	304,484 ..	22
1835,....	191,626 ..	43 ..	185,071 ..	29 ..	376,697 ..	72
1845,....	248,717 ..	.. ..	301,642 ..	48 ..	550,359 ..	48
1855,....	737,509 ..	37 ..	550,725 ..	29 ..	1,288,234 ..	66
1857,....	802,356 ..	10 ..	575,068 ..	51 ..	1,377,424 ..	61
1858,....	840,449 ..	08 ..	592,256 ..	33 ..	1,432,705 ..	41
1859,....	844,432 ..	24 ..	599,928 ..	44 ..	1,444,360 ..	68
1860,....	838,449 ..	51 ..	625,551 ..	47 ..	1,464,001 ..	03

X. VESSELS AND TONNAGE ENTERED INTO THE DISTRICT OF NEW-YORK, 1826—1860.

	American.		*Foreign.*		*Total.*	
Fiscal Years.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1826,..	.... ..	248,176 ..	.... ..	26,285 ..	.... ..	274,461
1830,..	.... ..	273,790 ..	.... ..	31,391 ..	.... ..	305,181
1835,..	1,528 ..	374,602 ..	480 ..	91,063 ..	2,008 ..	465,665
1840,..	1,443 ..	417,443 ..	512 ..	128,488 ..	1,955 ..	545,931
1845,..	1,450 ..	439,670 ..	558 ..	139,542 ..	2,008 ..	579,218
1850,..	1,882 ..	734,431 ..	1,281 ..	410,900 ..	3,163 ..	1,145,331
1855,..	2,588 ..	1,377,738 ..	1,185 ..	358,169 ..	3,773 ..	1,735,907
1857,..	3,014 ..	1,584,764 ..	1,054 ..	450,885 ..	4,068 ..	2,035,649
1858,..	2,401 ..	1,273,788 ..	929 ..	420,431 ..	3,330 ..	1,694,219
1859,..	2,657 ..	1,320,290 ..	1,245 ..	569,854 ..	3,902 ..	1,890,144
1860,..	2,645 ..	1,356,665 ..	1,337 ..	617,147 ..	3,982 ..	1,973,812

XI. STATEMENT EXHIBITING THE AMOUNT OF THE TONNAGE OF THE UNITED STATES AT VARIOUS PERIODS, ALSO THE REGISTERED, AND ENROLLED AND LICENSED TONNAGE EMPLOYED IN STEAM NAVIGATION EACH YEAR.

Years.	Registered Sail Tonnage.	Registered Steam.	Enrolled and Licensed Sail.	Enrolled and Licensed Steam.	Total Tonnage.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*
1830,.....	575,056 ..	1,419 ..	552,248 ..	63,053 ..	1,191,776
1831,.....	619,575 ..	877 ..	613,827 ..	33,568 ..	1,267,847
1832,.....	686,809 ..	181 ..	661,827 ..	90,633 ..	1,439,450
1833,.....	749,482 ..	545 ..	754,819 ..	101,305 ..	1,606,151
1834,.....	857,098 ..	340 ..	778,995 ..	122,474 ..	1,758,907
1835,.....	885,481 ..	340 ..	816,645 ..	122,474 ..	1,824,940
1845,.....	1,088,680 ..	6,492 ..	1,002,303 ..	319,527 ..	2,417,002
1846,.....	1,123,999 ..	6,287 ..	1,090,192 ..	341,606 ..	2,562,084
1847,.....	1,235,682 ..	5,631 ..	1,198,523 ..	399,210 ..	2,839,046
1848,.....	1,344,819 ..	16,068 ..	1,381,332 ..	411,823 ..	3,154,042
1849,.....	1,418,072 ..	20,870 ..	1,453,549 ..	441,525 ..	3,334,016
1850,.....	1,540,769 ..	44,942 ..	1,468,738 ..	481,005 ..	3,535,454
1851,.....	1,663,917 ..	62,390 ..	1,524,915 ..	521,217 ..	3,772,439
1852,.....	1,819,744 ..	79,704 ..	1,675,456 ..	563,536 ..	4,138,440
1853,.....	2,013,154 ..	90,520 ..	1,789,238 ..	514,098 ..	4,407,010
1854,.....	2,238,783 ..	95,036 ..	1,887,512 ..	581,571 ..	4,802,902
1855,.....	2,420,091 ..	115,045 ..	2,021,625 ..	655,240 ..	5,212,001
1856,.....	2,401,687 ..	89,715 ..	1,796,888 ..	583,362 ..	4,871,652
1857,.....	2,377,094 ..	86,873 ..	1,857,964 ..	618,911 ..	4,940,842
1858,.....	2,499,742 ..	78,027 ..	2,550,067 ..	651,363 ..	5,049,808
1859,.....	2,414,654 ..	92,748 ..	1,961,631 ..	676,005 ..	5,145,038
1860,.....	2,448,941 ..	97,296 ..	2,036,990 ..	770,641 ..	5,353,868

COMMERCIAL TREATIES WITH FOREIGN NATIONS, YEAR 1860.

I. JAPAN.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA:

A PROCLAMATION.

WHEREAS a treaty of amity and commerce between the United States and the Empire of Japan was concluded and signed by their respective plenipotentiaries at the City of Yedo, on the twenty-ninth day of July, one thousand eight hundred and fifty-eight, which treaty is word for word as follows:

The President of the United States of America and his Majesty the Ty-Coon of Japan, desiring to establish on firm and lasting foundations the relations of peace and friendship now happily existing between the two countries, and to secure the best interest of their respective citizens and subjects by encouraging, facilitating and regulating their industry and trade, have resolved to conclude a treaty of amity and commerce for this purpose, and have, therefore, named as their plenipotentiaries, that is to say: The President of the United States, His Excellency TOWNSEND HARRIS, Consul-General of the United States of America for the empire of Japan, and His Majesty the Ty-Coon of Japan, their Excellencies INO-OO-YE, Prince of Sinano, and IWASAY, Prince of Hego, who, after having communicated to each other their respective full powers, and found them to be in good and due form, have agreed upon and concluded the following articles:

ARTICLE I.

There shall henceforward be perpetual peace and friendship between the United States of America and His Majesty the Ty-Coon of Japan and his successors.

The President of the United States may appoint a diplomatic agent to reside at the city of Yedo, and consuls or consular agents to reside at any or all of the ports in Japan which are opened for American commerce by this treaty. The diplomatic agent and consul-general of the United States shall have the right to travel freely in any part of the empire of Japan from the time they enter on the discharge of their official duties.

The government of Japan may appoint a diplomatic agent to reside at Washington, and consuls or consular agents for any or all of the ports of the United States. The diplomatic agent and consul-general of Japan may travel freely in any part of the United States from the time they arrive in the country.

ARTICLE II.

The President of the United States, at the request of the Japanese

government, will act as a friendly mediator in such matters of difference as may arise between the government of Japan and any European power.

The ships of war of the United States shall render friendly aid and assistance to such Japanese vessels as they may meet on the high seas, so far as can be done without a breach of neutrality; and all American consuls residing at ports visited by Japanese vessels shall also give them such friendly aid as may be permitted by the laws of the respective countries in which they reside.

ARTICLE III.

In addition to the ports of Simoda and Hakodade, the following ports and towns shall be opened on the dates respectively appended to them, that is to say: Kanagawa, on the (4th of July, 1859) fourth day of July, one thousand eight hundred and fifty-nine; Nagasaki, on the (4th of July, 1859) fourth day of July, one thousand eight hundred and fifty-nine; Nee-e-gata, on the (1st of January, 1860) first day of January, one thousand eight hundred and sixty; Hiogo, on the (1st of January, 1863) first day of January, one thousand eight hundred and sixty-three.

If Nee-e-gata is found to be unsuitable as a harbor, another port on the west coast of Nipon shall be selected by the two governments in lieu thereof. Six months after the opening of Kanagawa, the port of Simoda shall be closed as a place of residence and trade for American citizens. In all the foregoing ports and towns American citizens may permanently reside; they shall have the right to lease ground, and purchase the buildings thereon, and may erect dwellings and warehouses. But no fortification or place of military strength shall be erected under pretence of building dwellings or warehouses; and to see that this article is observed, the Japanese authorities shall have the right to inspect, from time time, any buildings which are being erected, altered or repaired. The place which the Americans shall occupy for their buildings, and the harbor regulations, shall be arranged by the American consul and the authorities of each place, and if they cannot agree, the matter shall be referred to and settled by the American diplomatic agent and the Japanese government.

No wall, fence or gate shall be erected by the Japanese around the place of residence of the Americans, or any thing done which may prevent a free egress and ingress to the same.

From the (1st of January, 1862) first day of January, one thousand eight hundred and sixty-two, Americans shall be allowed to reside in the city of Yedo; and from the (1st of January, 1863) first day of January, one thousand eight hundred and sixty-three, in the city of Osaca, for the purposes of trade only. In each of these two cities a suitable place within which they may hire houses, and the distance they may go, shall be arranged by the American diplomatic agent and the government of Japan. Americans may freely buy from Japanese and sell to them any articles that either may have for sale, without the intervention of any Japanese officers in such purchase or sale, or in making or receiving payment for the same; and all classes of Japanese may purchase, sell, keep or use any articles sold to them by the Americans.

The Japanese government will cause this clause to be made public in every part of the empire as soon as the ratifications of this treaty shall be exchanged.

Munitions of war shall only be sold to the Japanese government and foreigners.

No rice or wheat shall be exported from Japan as cargo, but all Americans resident in Japan, and ships, for their crews and passengers, shall be furnished with sufficient supplies of the same. The Japanese government will sell, from time to time at public auction, any surplus quantity of copper that may be produced. Americans residing in Japan shall have the right to employ Japanese as servants or in any other capacity.

ARTICLE IV.

Duties shall be paid to the government of Japan on all goods landed in the country, and on all articles of Japanese production that are exported as cargo, according to the tariff hereunto appended.

If the Japanese custom-house officers are dissatisfied with the value placed on any goods by the owner, they may place a value thereon, and offer to take the goods at that valuation. If the owner refuses to accept the offer, he shall pay duty on such valuation. If the offer be accepted by the owner, the purchase-money shall be paid to him without delay, and without any abatement or discount.

Supplies for the use of the United States navy may be landed at Kanagawa, Hakodade and Nagasaki, and stored in warehouses, in the custody of an officer of the American government, without the payment of any duty. But, if any such supplies are sold in Japan, the purchaser shall pay the proper duty to the Japanese authorities.

The importation of opium is prohibited, and any American vessel coming to Japan for the purposes of trade, having more than three (3) catties (four pounds avoirdupois) weight of opium on board, such surplus quantity shall be seized and destroyed by the Japanese authorities. All goods imported into Japan, and which have paid the duty fixed by this treaty, may be transported by the Japanese into any part of the empire without the payment of any tax, excise or transit duty whatever.

No higher duties shall be paid by Americans on goods imported into Japan than are fixed by this treaty, nor shall any higher duties be paid by Americans than are levied on the same description of goods if imported in Japanese vessels, or the vessels of any other nation.

ARTICLE V.

All foreign coin shall be current in Japan, and pass for its corresponding weight of Japanese coin of the same description. Americans and Japanese may freely use foreign or Japanese coin in making payments to each other.

As some time will elapse before the Japanese will be acquainted with the value of foreign coin, the Japanese government will, for the period of one year after the opening of each harbor, furnish the Americans with Japanese coin, in exchange for theirs, equal weights being given and no discount taken for recoinage. Coins of all description (with the exception of Japanese copper coin) may be exported from Japan, and foreign gold and silver uncoined.

ARTICLE VI.

Americans committing offences against Japanese shall be tried in American consular courts, and, when guilty, shall be punished according to American law. Japanese committing offences against Americans shall be tried by the Japanese authorities and punished according to Japanese

law. The consular courts shall be open to Japanese creditors, to enable them to recover their just claims against American citizens, and the Japanese courts shall in like manner be open to American citizens for the recovery of their just claims against Japanese.

All claims for forfeitures or penalties for violations of this treaty, or of the articles regulating trade which are appended hereunto, shall be sued for in the consular courts, and all recoveries shall be delivered to the Japanese authorities.

Neither the American or Japanese governments are to be held responsible for the payment of any debts contracted by their respective citizens or subjects.

ARTICLE VII.

In the opened harbors of Japan, Americans shall be free to go where they please, within the following limits:

At Kanagawa, the river Logo, (which empties into the bay of Yedo between Kawasaki and Sinagawa) and (10) ten ri in any other direction.

At Hakodade, (10) ten ri in any direction.

At Hiogo, (10) ten ri in any direction, that of Kioto excepted, which city shall not be approached nearer than (10) ten ri. The crews of vessels resorting to Hiogo shall not cross the river Enagawa, which empties into the bay between Hiogo and Osaca. The distances shall be measured inland from Goyoso, or town hall of each of the foregoing harbors, the ri being equal to (4,275) four thousand two hundred and seventy-five yards, American measure.

At Nagasaki, Americans may go into any part of the imperial domain in its vicinity. The boundaries of Nee-e-gata, or the place that may be substituted for it, shall be settled by the American diplomatic agent and the government of Japan. Americans who have been convicted of felony, or twice convicted of misdemeanors, shall not go more than (1) one Japanese ri inland from the places of their respective residences, and all persons so convicted shall lose their right of permanent residence in Japan, and the Japanese authorities may require them to leave the country.

A reasonable time shall be allowed to all such persons to settle their affairs, and the American consular authority shall, after an examination into the circumstances of each case, determine the time to be allowed, but such time shall not in any case exceed one year, to be calculated from the time the person shall be free to attend to his affairs.

ARTICLE VIII.

Americans in Japan shall be allowed the free exercise of their religion, and for this purpose shall have the right to erect suitable places of worship. No injury shall be done to such buildings, nor any insult be offered to the religious worship of the Americans. American citizens shall not injure any Japanese temple or mia, or offer any insult or injury to Japanese religious ceremonies, or to the objects of their worship.

The Americans and Japanese shall not do any thing that may be calculated to excite religious animosity. The government of Japan has already abolished the practice of trampling on religious emblems.

ARTICLE IX.

When requested by the American consul, the Japanese authorities will

cause the arrest of all deserters and fugitives from justice, receive in jail all persons held as prisoners by the consul, and give to the consul such assistance as may be required to enable him to enforce the observance of the laws by the Americans who are on land, and to maintain order among the shipping. For all such service, and for the support of prisoners kept in confinement, the consul shall in all cases pay a just compensation.

ARTICLE X.

The Japanese government may purchase or construct, in the United States, ships of war, steamers, merchant ships, whale ships, cannon, munitions of war and arms of all kinds, and any other things it may require. It shall have the right to engage, in the United States, scientific, naval and military men, artisans of all kinds, and mariners to enter into its service. All purchases made for the government of Japan may be exported from the United States, and all persons engaged for its service may freely depart from the United States: *Provided*, That no articles that are contraband of war shall be exported, nor any persons engaged to act in a naval or military capacity, while Japan shall be at war with any power in amity with the United States.

ARTICLE XI.

The articles for the regulation of trade, which are appended to this treaty, shall be considered as forming a part of the same, and shall be equally binding on both the contracting parties to this treaty, and on their citizens and subjects.

ARTICLE XII.

Such of the provisions of the treaty made by Commodore Perry, and signed at Kanagawa, on the 31st of March, 1854, as conflict with the provisions of this treaty, are hereby revoked; and as all the provisions of a convention executed by the consul-general of the United States and the governors of Simoda, on the 17th of June, 1857, are incorporated in this treaty, that convention is also revoked.

The person charged with the diplomatic relations of the United States in Japan, in conjunction with such person or persons as may be appointed for that purpose by the Japanese government, shall have power to make such rules and regulations as may be required to carry into full and complete effect the provisions of this treaty, and the provisions of the articles regulating trade appended thereunto.

ARTICLE XIII.

After the (4th of July, 1872) fourth day of July, one thousand eight hundred and seventy-two, upon the desire of either the American or Japanese governments, and on one year's notice given by either party, this treaty, and such portions of the treaty of Kanagawa as remain unrevoked by this treaty, together with the regulations of trade hereunto annexed, or those that may be hereafter introduced, shall be subject to revision by commissioners appointed on both sides for this purpose, who will be empowered to decide on, and insert therein, such amendments as experience shall prove to be desirable.

ARTICLE XIV.

This treaty shall go into effect on the (4th of July, 1859,) fourth

day of July, in the year of our Lord one thousand eight hundred and fifty-nine, on or before which day the ratifications of the same shall be exchanged at the city of Washington; but if, from any unforeseen cause, the ratifications cannot be exchanged by that time, the treaty shall still go into effect at the date above mentioned.

The act of ratification on the part of the United States shall be verified by the signature of the President of the United States, countersigned by the Secretary of State, and sealed with the seal of the United States.

The act of ratification on the part of Japan shall be verified by the name and seal of His Majesty the Ty-Coon, and by the seals and signatures of such of his high officers as he may direct.

This treaty is executed in quadruplicate, each copy being written in the English, Japanese and Dutch languages, all the versions having the same meaning and intention, but the Duteh version shall be considered as being the original.

In witness whereof, the above-named plenipotentiaries have hereunto set their hands and seals, at the city of Yedo, this twenty-ninth day of July, in the year of our Lord one thousand eight hundred and fifty-eight, and of the independence of the United States of America the eighty-third, corresponding to the Japanese era, the nineteenth day of the sixth month of the fifth year of Ansei Mma.

TOWNSEND HARRIS. [SEAL.]

Regulations under which American Trade is to be conducted with Japan.

Within (48) forty-eight hours (Sundays excepted) after the arrival of an American ship in a Japanese port, the captain or commander shall exhibit to the Japanese custom-house authorities the receipt of the American consul, showing that he has deposited the ship's register and other papers, as required by the laws of the United States, at the American consulate, and he shall then make an entry of his ship, by giving a written paper, stating the name of the ship, and the name of the port from which she comes, her tonnage, the name of her captain or commander, the names of her passengers, (if any,) and the number of her crew, which paper shall be certified by the captain or commander to be a true statement, and shall be signed by him; he shall at the same time deposit a written manifest of his cargo, setting forth the marks and numbers of the packages and their contents, as they are described in his bills of lading, with the names of the person or persons to whom they are consigned. A list of the stores of the ship shall be added to the manifest. The captain or commander shall certify the manifest to be a true account of all the cargo and stores on board the ship, and shall sign his name to the same. If any error is discovered in the manifest, it may be corrected within (24) twenty-four hours (Sundays excepted) without the payment of any fee; but for any alteration or post entry to the manifest made after that time, a fee of ($15) fifteen dollars shall be paid. All goods not entered on the manifest shall pay double duties on being landed. Any captain or commander that shall neglect to enter his vessel at the Japanese custom-house within the time prescribed by this regulation, shall pay a penalty of ($60) sixty dollars for each day that he shall so neglect to enter his ship.

The Japanese government shall have the right to place custom-house officers on board of any ship in their ports (men-of-war excepted.) All custom-house officers shall be treated with civility, and such reasonable accommodation shall be allotted to them as the ship affords. No goods shall be unladen from any ship between the hours of sunset and sunrise, except by special permission of the custom-house authorities, and the hatches, and all other places of entrance into that part of the ship where the cargo is stowed, may be secured by Japanese officers, between the hours of sunset and sunrise, by affixing seals, locks or other fastenings; and if any person shall, without due permission, open any entrance that has been so secured, or shall break or remove any seal, lock or other fastening that has been affixed by the Japanese custom-house officers, every person so offending shall pay a fine of ($60) sixty dollars for each offence. Any goods that shall be discharged or attempted to be discharged from any ship, without having been duly entered at the Japanese custom-house, as hereinafter provided, shall be liable to seizure and confiscation.

Packages of goods made up with an attempt to defraud the revenue of Japan, by concealing therein articles of value which are not set forth in the invoice, shall be forfeited.

American ships that shall smuggle or attempt to smuggle goods in any of the non-opened harbors of Japan, all such goods shall be forfeited to the Japanese government, and the ship shall pay a fine of ($1,000) one thousand dollars for each offence. Vessels needing repairs may land their cargo for that purpose without the payment of duty. All goods so landed shall remain in charge of the Japanese authorities, and all just charges for storage, labor and supervision shall be paid thereon. But if any portion of such cargo be sold, the regular duties shall be paid on the portion so disposed of. Cargo may be transhipped to another vessel in the same harbor without the payment of duty; but all transhipments shall be made under the supervision of Japanese officers, and after satisfactory proof has been given to the custom-house authorities of the *bona fide* nature of the transaction, and also under a permit to be granted for that purpose by such authorities. The importation of opium being prohibited, if any person or persons shall smuggle, or attempt to smuggle, any opium, he or they shall pay a fine of ($15) fifteen dollars for each catty of opium so smuggled or attempted to be smuggled; and if more than one person shall be engaged in the offence, they shall collectively be held responsible for the payment of the foregoing penalty.

The owner or consignee of any goods, who desires to land them, shall make an entry of the same at the Japanese custom-house. The entry shall be in writing, and shall set forth the name of the person making the entry, and the name of the ship in which the goods were imported, and the marks, numbers, packages and contents thereof, with the value of each package extended separately in one amount, and at the bottom of the entry shall be placed the aggregate value of all the goods contained in the entry. On each entry, the owner or consignee shall certify, in writing, that the entry then presented exhibits the actual cost of the goods, and that nothing has been concealed whereby the customs of Japan would be defrauded; and the owner or consignee shall sign his name to such certificate.

The original invoice or invoices of the goods so entered shall be pre-

sented to the custom-house authorities, and shall remain in their possession until they have examained the goods contained in the entry.

The Japanese officers may examine any or all of the packages so entered, and for this purpose may take them to the custom-house, but such examination shall be without expense to the importer or injury to the goods, and after examination, the Japanese shall restore the goods to their original condition in the packages, (so far as may be practicable,) and such examination shall be made without any unreasonable delay.

If any owner or importer discovers that his goods have been damaged on the voyage of importation before such goods have been delivered to him, he may notify the custom-house authorities of such damage, and he may have the damaged goods appraised by two or more competent and disinterested persons, who, after due examination, shall make a certificate setting forth the amount per cent. of damage on each separate package, describing it by its mark and number, which certificates shall be signed by the appraisers in presence of the custom-house authorities, and the importer may attach the certificate to his entry, and make a corresponding deduction from it. But this shall not prevent the custom-house authorities from appraising the goods in the manner provided in article fourth of the treaty, to which these regulations are appended.

After the duties have been paid, the owner shall receive a permit authorizing the delivery to him of the goods, whether the same are at the custom-house or on ship-board. All goods intended to be exported shall be entered at the Japanese custom-house before they are placed on ship-board. The entry shall be in writing, and shall state the name of the ship by which the goods are to be exported, with the marks and numbers of the packages, and the quantity, description and value of their contents. The exporter shall certify in writing that the entry is a true account of all the goods contained therein, and shall sign his name thereto. Any goods that are put on board of a ship for exportation before they have been entered at the custom-house, and all packages which contain prohibited articles, shall be forfeited to the Japanese government.

No entry at the custom-house shall be required for supplies for the use of ships, their crews and passengers, nor for the clothing, &c., of passengers.

Ships wishing to clear shall give (24) twenty-four hours' notice at the custom-house, and at the end of that time they shall be entitled to their clearance; but if it be refused, the custom-house authorities shall immediately inform the captain or consignee of the ship of the reasons why the clearance is refused, and they shall also give the same notice to the American consul.

Ships of war of the United States shall not be required to enter or clear at the custom-house, nor shall they be visited by Japanese custom-house or police officers. Steamers carrying the mails of the United States may enter and clear on the same day, and they shall not be required to make a manifest, except for such passengers and goods as are to be landed in Japan. But such steamers shall, in all cases, enter and clear at the custom-house.

Whale ships touching for supplies, or ships in distress, shall not be required to make a manifest of their cargo; but if they subsequently wish to trade, they shall then deposit a manifest, as required in regulation first.

The word ship, wherever it occurs in these regulations, or in the treaty to which they are attached, is to be held as meaning ship, bark, brig, schooner, sloop or steamer.

Any person signing a false declaration or certificate, with the intent to defraud the revenue of Japan, shall pay a fine of ($125) one hundred and twenty-five dollars for each offence.

No tonnage duties shall be levied on American ships in the ports of Japan, but the following fees shall be paid to the Japanese custom-house authorities: For the entry of a ship, ($15,) fifteen dollars. For the clearance of a ship, ($7,) seven dollars. For each permit, ($1½,) one dollar and a half. For each bill of health, ($1½,) one dollar and a half. For any other document, ($1½,) one dollar and a half.

Duties shall be paid to the Japanese government on all goods landed in the country according to the following tariff:

Class One.—All articles in this class shall be free of duty. Gold and silver coined or uncoined. Wearing apparel in actual use. Household furniture and printed books not intended for sale, but the property of persons who come to reside in Japan.

Class Two.—A duty of (5) five per cent. shall be paid on the following articles:

All articles used for the purpose of building, rigging, repairing or fitting out of ships. Whaling gear of all kinds. Salted provisions of all kinds. Bread and breadstuffs. Living animals of all kinds. Coals. Timber for building houses. Rice. Paddy. Steam machinery. Zinc. Lead. Tin. Raw silk.

Class Three.—A duty of (35) thirty-five per cent. shall be paid on all intoxicating liquors, whether prepared by distillation, fermentation or in any other manner.

Class Four.—All goods not included in any of the preceding classes shall pay a duty of (20) twenty per cent.

All articles of Japanese production, which are exported as cargo, shall pay a duty of (5) five per cent., with the exception of gold and silver coin and copper in bars. (5) Five years after the opening of Kanagawa the import and export duties shall be subject to revision if the Japanese government desires it.

TOWNSEND HARRIS. [L. S.]

II. CONVENTION WITH PARAGUAY.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA:

A PROCLAMATION.

WHEREAS a convention relating to the claims of the "United States and Paraguay Navigation Company," against the Paraguayan government, was concluded between the United States of America and the Republic of Paraguay, and was signed by their respective plenipotentiaries at Asuncion on the fourth day of February, one thousand eight hundred

and fifty-nine, the original of which convention being in the English and Spanish languages, is, word for word, as follows:

Special convention between the United States of America and the Republic of Paraguay, relating to the claims of the "United States and Paraguayan Navigation Company" against the Paraguayan government.

His Excellency the President of the United States of America and his Excellency the President of the Republic of Paraguay, desiring to remove every cause that might interfere with the good understanding and harmony, for a time so unhappily interrupted between the two nations, and now so happily restored, and which it is so much for their interest to maintain; and desiring for this purpose to come to a definite understanding, equally just and honorable to both nations, as to the mode of settling a pending question of the said claims of the "United States and Paraguay Navigation Company"—a company composed of citizens of the United States—against the government of Paraguay, have agreed to refer the same to a special and respectable commission, to be organized and regulated by the convention hereby established between the two high contracting parties; and for this purpose they have appointed and conferred full powers, respectively, to wit:

His Excellency the President of the United States of America upon JAMES B. BOWLIN, a Special Commissioner of the said United States of America, specifically charged and empowered for this purpose; and his Excellency the President of the Republic of Paraguay upon Señor NICOLAS VASQUEZ, Secretary of State and Minister of Foreign Affairs of the said Republic of Paraguay, who, after exchanging their full powers, which were found in good and proper form, agreed upon the following articles:

ARTICLE I.

The government of the Republic of Paraguay binds itself for the responsibility in favor of the "United States and Paraguay Navigation Company," which may result from the decree of commissioners, who, it is agreed, shall be appointed as follows.

ARTICLE II.

The two high contracting parties, appreciating the difficulty of agreement upon the amount of the reclamations to which the said company may be entitled, and being convinced that a commission is the only equitable and honorable method by which the two countries can arrive at a perfect understanding thereof, hereby covenant to adjust them accordingly by a loyal commission. To determine the amount of said reclamations it is therefore agreed to constitute such a commission, whose decision shall be binding, in the following manner:

The government of the United States of America shall appoint one commissioner, and the government of Paraguay shall appoint another; and these two, in case of disagreement, shall appoint a third, said appointment to devolve upon a person of loyalty and impartiality, with the condition that, in case of difference between the commissioners in the choice of an umpire, the diplomatic representatives of Russia and Prussia, accredited to the government of the United States of America, at the city of Washington, may select such umpire.

The two commissioners named in the said manner shall meet in the city of Washington, to investigate, adjust and determine the amount of the claims of the above-mentioned company, upon sufficient proofs of the charges and defences of the contending parties.

ARTICLE III.

The said commissioners, before entering upon their duties, shall take an oath before some judge of the United States of America that they will fairly and impartially investigate the said claims, and a just decision thereupon render, to the best of their judgment and ability.

ARTICLE IV.

The said commissioners shall assemble, within one year after the ratification of the "treaty of friendship, commerce and navigation" this day celebrated at the city of Assumption, between the two high contracting parties, at the city of Washington, in the United States of America, and shall continue in session for a period not exceeding three months, within which, if they come to an agreement, their decision shall be proclaimed; and in case of disagreement, they shall proceed to the appointment of an umpire, as already agreed.

ARTICLE V.

The government of Paraguay hereby binds itself to pay to the government of the United States of America, in the city of Assumption, Paraguay, thirty days after presentation to the government of the republic, the draft which that of the United States of America shall issue for the amount for which the two commissioners concurring, or by the umpire, shall declare it responsible to the said company.

ARTICLE VI.

Each of the high contracting parties shall compensate the commissioner it may appoint the sum of money he may stipulate for his services, either by instalments or at the expiration of his task. In case of the appointment of an umpire, the amount of his remuneration shall be equally borne by both contracting parties.

ARTICLE VII.

The present convention shall be ratified within fifteen months, or earlier if possible, by the government of the United States of America, and by the President of the Republic of Paraguay, within twelve days from this date. The exchange of ratifications shall take place in the city of Washington.

In faith of which, and in virtue of our full powers, we have signed the present convention in English and Spanish, and have hereunto set our respective seals.

Done at Assumption this fourth day of February, in the year of our Lord one thousand eight hundred and fifty-nine, being the eighty-third year of the independence of the United States of America, and the forty-seventh of that of Paraguay.

JAMES B. BOWLIN, [SEAL.]
NICOLAS VASQUEZ. [SEAL.]

III. Treaty with Paraguay.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA:

A PROCLAMATION.

Whereas a treaty of friendship, commerce and navigation, between the United States of America and the Republic of Paraguay, was concluded and signed by their respective plenipotentiaries, at Asuncion, on the fourth day of February, one thousand eight hundred and fifty-nine, the original of which treaty being in the English and Spanish languages, is, word for word, as follows:

A treaty of friendship, commerce and navigation between the governments of the United States of America and of the Republic of Paraguay, concluded and signed in the city of Assumption, the capital of the Republic of Paraguay, on the fourth day of February, in the year of our Lord one thousand eight hundred and fifty-nine, the eighty-third year of the independence of the United States of America, and the forty-seventh of that of the Republic of Paraguay.

In the name of the Most Holy Trinity! The governments of the two republics, the United States of America and of Paraguay, in South America, being mutually disposed to cherish more intimate relations and intercourse than those which have heretofore subsisted between them, and believing it to be of mutual advantage to adjust the conditions of such relations by signing a "treaty of friendship, commerce and navigation," for that object have nominated their respective plenipotentiaries, that is to say: His Excellency the President of the United States of America has nominated James B. Bowlin a Special Commissioner of the United States of America, at Assumption, and His Excellency the President of the Republic of Paraguay has nominated the Paraguayan citizen, Nicolas Vasquez, Secretary of State and Minister of Foreign Relations of the Republic of Paraguay, who, after having communicated competent authorities, have agreed upon and concluded the following articles:

Article I.

There shall be perfect peace and sincere friendship between the government of the United States of America and the government of the Republic of Paraguay, and between the citizens of both States, and without exception of persons or places. The high contracting parties shall use their best endeavors that this friendship and good understanding may be constantly and perpetually maintained.

Article II.

The Republic of Paraguay, in the exercise of the sovereign right which pertains to her, concedes to the merchant flag of the citizens of the United States of America the free navigation of the river Paraguay, as far as the dominions of the Empire of Brazil, and of the right side of the Paraná, throughout all its course belonging to the republic, subject to police and fiscal regulations of the supreme government of the republic, in conformity with its concessions to the commerce of friendly nations. They shall be at liberty, with their ships and cargoes, freely and securely to

come to and to leave all the places and ports which are already mentioned; to remain and reside in any part of the said territories, hire houses and warehouses, and trade in all kinds of produce, manufactures and merchandise of lawful commerce, subject to the usages and established customs of the country. They may discharge the whole or a part of their cargoes at the ports of Pilar, and where commerce with other nations may be permitted, or proceed with the whole or part of their cargo to the port of Assumption, according as the captain, owner or other duly authorized person shall deem expedient.

In the same manner shall be treated and considered such Paraguayan citizens as may arrive at the ports of the United States of America, with cargoes in Paraguayan vessels, or vessels of the United States of America.

ARTICLE III.

The two high contracting parties hereby agree that any favor, privilege or immunity whatever in matters of commerce or navigation, which either contracting party has actually granted, or may hereafter grant to the citizens or subjects of any other State, shall extend, in identity of cases and circumstances, to the citizens of the other contracting party gratuitously, if the concession in favor of that other State shall have been gratuitous, or in return for an equivalent compensation, if the concession shall have been conditional.

ARTICLE IV.

No other or higher duties shall be imposed on the importation or exportation of any article of the growth, produce or manufacture of the two contracting States than are or shall be payable on the like article being the growth, produce or manufacture of any other foreign country. No prohibition shall be imposed upon the importation or exportation of any article of the growth, produce or manufacture of the territories of either of the two contracting parties into the territories of the other, which shall not equally extend to the importation or exportation of similar articles to the territories of any other nation.

ARTICLE V.

No other or higher duties or charges on account of tonnage, light or harbor dues, pilotage, salvage in case of damage or shipwreck, or any other local charges, shall be imposed in any of the ports of the territories of the Republic of Paraguay on vessels of the United States of America than those payable in the same ports by Paraguayan vessels, nor in the ports of the territories of the United States of America on Paraguayan vessels than shall be payable in the same ports by vessels of the United States of America.

ARTICLE VI.

The same duties shall be paid upon the importation and exportation of any article which is or may be legally importable or exportable into the dominions of the United States of America and into those of Paraguay, whether such importation or exportation be made in vessels of the United States of America, or in Paraguayan vessels.

ARTICLE VII.

All vessels which, according to the laws of the United States of America, are to be deemed vessels of the United States of America, and all vessels which, according to the laws of Paraguay, are to be deemed Paraguayan vessels, shall, for the purposes of this treaty, be deemed vessels of the United States of America and Paraguayan vessels respectively.

ARTICLE VIII.

Citizens of the United States of America shall pay, in territories of the Republic of Paraguay, the same import and export duties which are established or may be established hereafter for Paraguayan citizens. In the same manner the latter shall pay, in the United States of America, the duties which are established, or may hereafter be established for citizens of the United States of America.

ARTICLE IX.

All merchants, commanders of ships and others, the citizens of each country respectively, shall have full liberty, in all the territories of the other, to manage their own affairs themselves, or to commit them to the management of whomsoever they please, as agent, broker, factor or interpreter; and they shall not be obliged to employ any other persons than those employed by natives, nor to pay to such persons as they shall think fit to employ any higher salary or remuneration than such as is paid in like cases by natives.

The citizens of the United States of America in the territories of Paraguay, and the citizens of Paraguay in the United States of America, shall enjoy the same full liberty which is now or may hereafter be enjoyed by natives of each country respectively, to buy from and sell to whom they like all articles of lawful commerce, and to fix the prices thereof as they shall see good, without being affected by any monopoly, contract or exclusive privilege of sale or purchase, subject, however, to the general ordinary contributions or imposts established by law.

The citizens of either of the two contracting parties in the territories of the other shall enjoy full and perfect protection for their persons and property, and shall have free and open access to the courts of justice for the prosecution and defence of their just rights; they shall enjoy, in this respect, the same rights and privileges as native citizens, and they shall be at liberty to employ, in all cases, the advocates, attorneys or agents of whatever description, whom they may think proper.

ARTICLE X.

In whatever relates to the police of the ports, the lading or unlading of ships, the warehousing and safety of merchandise, goods and effects, the succession to personal estates, by will or otherwise, and the disposal of personal property of every sort and denomination, by sale, donation, exchange or testament, or in any other manner whatsoever, as also with regard to the administration of justice, the citizens of each contracting party shall enjoy, in the territories of the other, the same privileges, liberties and rights as native citizens, and shall not be charged, in any of these respects, with any other or higher imposts or duties than those

which are or may be paid by native citizens, subject always to the local laws and regulations of such territories.

In the event of any citizen of either of the two contracting parties dying without will or testament in the territory of the other contracting party, the consul-general, consul or vice-consul of the nation to which the deceased may belong, or, in his absence, the representative of such consul-general, consul or vice-consul shall, so far as the laws of each country will permit, take charge of the property which the deceased may have left, for the benefit of his lawful heirs and creditors, until an executor or administrator be named by the said consul-general, consul or vice-consul, or his representative.

Article XI.

The citizens of the United States of America residing in the territories of the Republic of Paraguay, and the citizens of the Republic of Paraguay, residing in the United States of America, shall be exempted from all compulsory military service whatsoever, whether by sea or land, and from all forced loans or military exactions or requisitions; and they shall not be compelled to pay any charges, requisition or taxes other or higher than those that are or may be paid by native citizens.

Article XII.

It shall be free for each of the two contracting parties to appoint consuls for the protection of trade, to reside in the territories of the other party; but before any consul shall act as such, he shall, in the usual form, be approved and admitted by the government to which he is sent; and either of the two contracting parties may except from the residence of consuls such particular places as either of them may judge fit to be excepted.

The diplomatic agents and consuls of the United States of America in the territories of the Republic of Paraguay shall enjoy whatever privileges, exemptions and immunities are or may be there granted to the diplomatic agents and consuls of any other nation whatever; and, in like manner, the diplomatic agents and consuls of the Republic of Paraguay in the United States of America shall enjoy whatever privileges, exemptions and immunities are or may be there granted to agents of any other nation whatever.

Article XIII.

For the better security of commerce between the citizens of the United States of America and the citizens of the Republic of Paraguay, it is agreed that if at any time any interruption of friendly intercourse or any rupture should unfortunately take place between the two contracting parties, the citizens of either of the said contracting parties, who may be established in the territories of the other in the exercise of any trade or special employment, shall have the privilege of remaining and continuing such trade or employment therein without any manner of interruption, in full enjoyment of their liberty and property, as long as they behave peaceably and commit no offence against the laws; and their goods and effects, of whatever description they may be, whether in their own custody or entrusted to individuals or to the State, shall not be liable to seizure or sequestration, or to any other charges or demands than those

which may be made upon the like effects or property belonging to native citizens. If, however, they prefer to leave the country, they shall be allowed the time they may require to liquidate their accounts and dispose of their property, and a safe conduct shall be given them to embark at the ports which they shall themselves select. Consequently, in the case referred to of a rupture, the public funds of the contracting States shall never be confiscated, sequestered or detained.

ARTICLE XIV.

The citizens of either of the two contracting parties residing in the territories of the other shall enjoy, in regard to their houses, persons and properties, the protection of the government in as full and ample a manner as native citizens.

In like manner the citizens of each contracting party shall enjoy, in the territories of the other, full liberty of conscience, and shall not be molested on account of their religious belief; and such of those citizens as may die in the territories of the other party shall be buried in the public cemeteries, or in places appointed for the purpose, with suitable decorum and respect.

The citizens of the United States of America, residing within the territories of the Republic of Paraguay, shall be at liberty to exercise, in private and in their own dwellings, or within the dwellings or offices of consuls or vice-consuls of the United States of America, their religious rites, services and worship, and to assemble therein for that purpose, without hindrance or molestation.

ARTICLE XV.

The present treaty shall be in force during ten years, counted from the day of the exchange of the ratifications; and further, until the end of twelve months after the government of the United States of America, on the one part, or the government of Paraguay on the other, shall have given notice of its intention to terminate the same.

The Paraguayan government shall be at liberty to address to the government of the United States of America, or to its representative in the Republic of Paraguay, the official declaration agreed upon in this article.

ARTICLE XVI.

The present treaty shall be ratified by His Excellency the President of the United States of America within the term of fifteen months, or earlier if possible, and by His Excellency the President of the Republic of Paraguay within twelve days from this date, and the ratifications shall be exchanged in Washington.

In witness whereof, the respective plenipotentiaries have signed it, and affixed thereto their seals.

Done at Assumption, this fourth day of February, in the year of our Lord one thousand eight hundred and fifty-nine.

JAMES B. BOWLIN, [SEAL.]
NICOLAS VASQUEZ. [SEAL.]

CHAMBERS OF COMMERCE AND BOARDS OF TRADE.

Monthly Meeting of the Chamber of Commerce, New-York, Wednesday, July 3, 1861.

THE monthly meeting of the Chamber of Commerce, N. Y., was held on Wednesday, (the regular day falling on July 4th,) at one o'clock—P. PERIT, Esq., President, in the chair.

Harbor Defences.—Mr. GEORGE OPDYKE, Chairman of the Committee on the present defences of the harbor of New-York, reported that the Committee, in performing the duty assigned them, visited a portion of the fortifications in person, and, though unable to find leisure to visit the whole, they had such information, from reliable sources, that they believed they had exact knowledge of the present condition of all the forts and their armaments, and had accordingly drawn up the following memorial:

New-York, July 3, 1861.

To the Honorable the Congress of the United States, in Senate and House of Representatives convened:

The Chamber of Commerce of the State of New-York respectfully represent, that the defences of the harbor of New-York require the immediate attention of government. In their present neglected condition they are unworthy of the government, and utterly unreliable as a means of defence. A hostile fleet might pass them with little or no risk of injury, and lay the city in ashes. In proof of this, the following details are respectfully submitted:

Fort Schuyler, the only defensive work that protects the city from approaches by way of the East River, is without armament.

Fort Richmond, Staten Island, the only modern and substantial work that commands the main entrance to the harbor, is also without armament.

Fort Tompkins, situated on the heights back of Fort Richmond, and chiefly intended to protect the latter from land attacks, is unfinished, and the work on it entirely suspended.

The projected fortress at Sandy Hook, the largest and most important of all our harbor defences, is in the earlier stages of its construction, and unless the appropriations for it are increased, many months must elapse before it will be in readiness to receive any portion of its armament.

Fort Hamilton, on the Long Island side of the Narrows, has a few inferior guns mounted, as has also the breastworks opposite on Staten Island.

Fort Lafayette, at the Narrows, has a full armament of inferior guns; but it is an old fort, of little strength.

The fortifications on Bedlow's Island and Governor's Island are well supplied with guns, chiefly of the old style; but the proximity of these forts to the city renders them altogether inadequate as a means of protecting it from the shells and heavy metal of iron-cased steamers.

These constitute the harbor defences of New-York. It will be seen from the foregoing details that, in their present condition, they afford very inadequate protection to the city against the approaches of a hostile fleet. It is generally believed that the civil war in which we are now involved renders our foreign relations so critical, that we are liable at any moment to be precipitated into a foreign war. Under these circumstances, common prudence demands that government should promptly provide for the safety of the commercial emporium of the nation, by making its defences so strong and perfect, that they will be able to repel any possible combination of naval force. Your memorialists believe that, to secure this end, it is only necessary—

First.—To furnish all the existing fortifications with new armament, of the heaviest metal and most approved style, and with proper garrisons.

Second.—To complete, at the earliest possible moment, the fortifications at Sandy Hook, and Fort Tompkins on Staten Island.

Third.—To construct floating batteries of iron, to guard the Swash and minor channels, and to aid the forts in repelling or sinking iron-cased steamers.

It is believed that these means would be ample to resist all the accumulated power that steam iron-clad hulls and rifle cannon have given to ships of war. The manning and re-arming the forts with new guns, of the most approved style, may be done promptly and at little expense; and the defenceless condition of the city demands that it should be done at once. The completion of the two forts in progress, and the construction of the floating batteries, will require time and a liberal expenditure of money; but this your memorialists venture to hope will be given cheerfully.

Hitherto the defences of New-York have been sadly neglected, and yet she has peculiar claims on government to provide liberally for her safety. She is the commercial and financial centre of the nation—the heart, whose pulsations give vitality to its industry and credit—and munificent contributions in men and money, to sustain the government in its hour of greatest peril, gives ample assurances that the means of defence placed at her command will never be used against the government or its friends.

The facts, thus briefly stated, demonstrate the necessity of prompt action in the premises, and at the same time warrant your memorialists in asking, respectfully but earnestly, that your honorable bodies will make early and liberal appropriations for the objects referred to.

Mr. Opdyke presented the following resolution, by order of the committee, which was unanimously passed:

Resolved, That copies of the foregoing memorial, duly attested by the officers of the Chamber, be forwarded to the President of the United States and to both Houses of Congress, and that a committee be appointed to proceed to Washington for the purpose of enforcing its views,

and urging upon the executive and upon Congress the necessity of prompt action.

Mr. OPDYKE continued: While upon this subject I may state to the Chamber that there was placed in the hands of the committee an application from some gentlemen, who are engaged in getting up a local artillery battalion for harbor and coast defences, for material aid. The committee not having any power to give funds for the purpose, yet deeming the object a most worthy one, submit to the Chamber the following:

Resolved, That the local artillery battalion which it is proposed to equip and drill for harbor and coast defences, would prove a most valuable auxiliary to the defences of the city. The Chamber therefore heartily commends its appeals for equipments and other aid to the favorable consideration of the State Military Board and to the liberality of the citizens of New-York.

On motion, the report was adopted.

Mr. PHELPS, before adopting the memorial and resolution, wished an amendment to that portion which stated that "the civil war in which we are now involved renders our foreign relations so critical that we are likely at any moment to be precipitated into foreign war." He did not think there was any such danger of rupture, and did not wish such a statement to issue from the Chamber.

Mr. OPDYKE said that every member of the Chamber could judge of the ill-feeling engendered between the people of this country and the government of Great Britain. It was well known that the ramifications of our commerce, extending over the civilized world, necessarily interfered with the interests and ambitious views of other countries, and rendered us at any moment liable to the calamity of a foreign war. Though not likely to occur, there was a liability to it; and it was to meet just such a contingency that we were seeking to make our harbor defences efficient.

Mr. PHELPS was sorry to hear any suggestion of an unpleasant feeling existing between our government and that of Great Britain. He had heard it stated by Lord LYONS that nothing but the most friendly relations existed; for his own part, he believed that neither the British government nor the people wished us any thing but peace and prosperity.

Mr. BLOODGOOD was in favor of the language of the memorial. Within a few days he had received from Havre a French paper, containing correspondence between the merchants of Havre and the Minister in Paris. The merchants state that they fear the commerce of France may suffer from the state of things in this country, to which the Minister replies that he thanks them for their advice, but the French government means to sustain her rights on this side of the world, and adds, that "*between the two fractions of the once United States* of America, we will take care that the French flag is respected." Mentioning this to a well-known diplomatist, he remarked: "For God's sake, do not make that public." It seemed to have escaped the attention of the New-York editors, who were spending more time in looking for office than for the good of the country.

Mr. HOTALING fully coincided with the language of the report. Whether we had foreign wars or not, our harbor defences should be put in different repair.

The memorial and accompanying resolutions were adopted unani-

mously, and the following gentlemen were named by the president as the committee to present the memorial to Congress:

GEORGE OPDYKE,	ROBERT B. MINTURN,
GEORGE W. BLUNT,	A. A. LOW,
CHARLES H. MARSHALL,	LLOYD ASPINWALL,
DENNING DUER,	AUGUSTUS C. RICHARDS,
EZRA NYE,	JOHN D. JONES.

Portrait of a Pirate.—MR. GEORGE W. BLUNT moved that the portrait of Captain WILSON, master of the MINNIE SCHIFFER, who acted so bravely in rescuing the lives of a large number of persons, but who had now turned pirate, commanding a privateer from New-Orleans, be taken from the walls of the Chamber.

The Chairman suggested that it could be removed, and probably the subscribers to a service of plate intended for Captain WILSON, but not yet delivered, might, under the circumstances, desire to give it some other destination.

A portrait of the Hon. S. P. CHASE, Secretary of the Treasury, (life size,) was exhibited to the members. The artist offers to sell this portrait and donate the proceeds to the fund for the relief of the New-York volunteers.

The Secretary reported that a copy of the map of Virginia, Maryland and Delaware, published by Messrs. E. & G. W. BLUNT, had been presented by that firm to the Chamber, also a copy of the New-York Shippers and Consignees' Guide, by Messrs. BAKER & GODWIN.

The following new members were elected, after which the Chamber adjourned:

HUGH N. CAMP,	THOMAS RICHARDSON,
SAMUEL COLGATE,	JAMES A. ROOSEVELT,
CHARLES DIMON,	THEODORE ROOSEVELT,
JOHN EADIE,	BARNET L. SOLOMON.
WILLIAM LYELL,	

PROTECTION OF THE HARBOR OF NEW-YORK.

A Local Artillery Battalion Suggested.—The following memorial has been addressed to Governor MORGAN by prominent gentlemen of this city:

To his Excellency EDWIN D. MORGAN, *Governor of the State of New-York:*

The undersigned, merchants and property owners of the city of New-York, respectfully represent, that inasmuch as the present emergencies of the government may, and probably will, require all the available forces of the regular service to be engaged in active operations, and that our harbor and forts may consequently be left with a force insufficient for its protection, it is deemed imperative that *a Local Artillery Battalion*, completely drilled by experienced officers, should be organized and equipped at once; and as the undersigned are informed that competent officers are available for such service, and that one company of experienced men is already formed and capable of performing this service, which would form a nucleus for the organization, we respectfully request that such a battalion may be organized at once.

In the report of the Military Commission to Europe it is well stated that "our regular army never can, and perhaps never ought to be large enough to provide for all the contingencies that may arise, but it should be as large as its ordinary avocations in the defence of the frontier will justify; and the greatest possible care should be bestowed upon the instruction in the special arms of the artillery and engineer troops.

"The militia and volunteer system should be placed upon some tangible and effective basis; instructions furnished them from the regular army, and all possible means taken to spread sound military information among them. In the vicinity of our sea-coast fortifications, it would be well to provide a sufficient number of volunteer companies, with the means of instruction in heavy artillery; detailing officers of the regular artillery as instructors. In the time of war, or when war is imminent, local companies of regular artillery might easily be enlisted for short terms of service, or for the war, in sea-coast towns. The same thing might advantageously be carried into effect on a small scale in time of peace."—*McClellan's Report.*

These remarks, which are the deductions of scientific and military men, need no argument from us to corroborate their worth, and are to us a convincing proof of the necessities of the organization referred to.

All of which we respectfully submit for your Excellency's consideration.

Brown, Brothers & Co.,	N. L. Griswold,
Goodhue & Co.,	A. A. Low & Brother,
Howland & Aspinwall,	C. H. Marshall,
Grinnell, Minturn & Co.,	P. Perit,
Moses Taylor & Co.,	Richard Lathers,

Wm. Whitlock, Jr.

JOURNAL OF MINING AND MANUFACTURES.

New Silver Alloy—Statistics of Lowell—Michigan Copper Mines—French Wines—Flax Cotton—New Mineral Discoveries in California.

NEW SILVER ALLOY.

A beautiful new alloy is stated by foreign contemporaries to have been invented recently, after many experiments, by Messrs. De Ruolz and De Fontenay, France. It is said to be well adapted for small coins and industrial purposes. It consists of one-third silver united with 25 to 30 per cent. of nickel, and from 37 to 42 of copper. Phosphorus is used as a flux in making the metals combine, but when first made and cooled it is very brittle. To render it ductile, the phosphorus must all be removed by reheating, after which the alloy resembles a simple metal, and presents in a very high degree the qualities to which the precious metals owe their superiority. It resembles platinum and silver of $\frac{9}{10}\frac{9}{0}\frac{9}{0}$ in color; it takes a very brilliant polish. Its tenacity and hardness are extreme. It is ductile, malleable and very difficult of fusion; very sonorous, unalterable in the air, and attacked only by the most energetic re-agents. It has no odor, and its specific gravity is but little inferior to that of silver. It is

easy to estimate the important part such an alloy is calculated to play in the industrial arts, and especially in the silversmith's art—in, to a great extent, replacing silver, of which its price is 40 per cent. less, and as its hardness gives it a marked superiority. Again, articles which are merely silvered or gilt have, it is true, a great advantage in their low price; but they quickly deteriorate, and can be re-silvered or regilt only a very few times, after which they must be replaced by new ones, and, in the long run, entail such an outlay as to confirm the old adage, that "the cheapest is the dearest in the end."

STATISTICS OF LOWELL MANUFACTURES.

Capital stock,		$13,900,000
Number of mills,	No.,	54
Spindles,	"	403,696
Looms,	"	12,190
Females employed,	"	8,405
Males employed,	"	3,979
Yards made per week,	yds.,	2,481,000 cotton.
	"	82,000 woollen.
	"	25,000 carpets.
Cotton consumed per week, pounds,	lbs.,	823,000
Clean wool consumed per week, pounds,	"	75,000
Yards, dyed and printed,	yds.,	15,586,000
Tons anthracite coal, per annum,	tons,	30,400
Charcoal, bushels, per annum,	bush.,	26,850
Wood, per annum, cords,	cords,	1,720
Oil, per annum, gallons,	galls.,	55,682 oil.
	"	20,000 lard.
Starch, pounds, per annum,	lbs.,	1,631,000
Flour, barrels, per annum,	bbls.,	1,485

PRODUCTS OF THE MICHIGAN COPPER MINES.

The following is an approximate estimate of the product of native copper from the opening of the Lake Superior mines, in 1845 to 1860, inclusively, in tons of 2,000 lbs.:

PRODUCE FROM 1845 TO 1857, INCLUSIVELY.

		Rough.	*Refined.*
		24,475	18,945
Shipped in 1858,	5,896 tons.	....	....
Less, included in above item,	888 "	....	....
	....	5,008	3,500
Shipped in 1859,	....	6,058	4,200
" 1860,	....	8,614	6,000
	....	44,155	32,654

The principal copper mines of Cornwall and Devon are comprised within a zone of a mile and a half in width, and thirty-three miles in length. The product of that district in 1860 was 13,212 tons, 1,507 tons less than in 1856. This result has been obtained after workings of 250 years.

The Lake Superior metalliferous belt extends within the limits of Michigan alone, as measured on the range, 160 miles, and averaging five miles in breadth.

The present and perhaps prospective low price of copper will prove no serious detriment to the mining interests. On the contrary, the lessening of the cost of production will be hastened. The success of some of the leading mines has led to some extravagance of management. The isolation of the country has rendered it difficult to get a resident mining population. The peculiarity of the deposits of mineral wealth, and the want of economical machinery for reducing the stamp work to marketable shape, have been especial hindrances to the accumulation of profits. In some instances there has been an unwise holding back of capital, the shareholders preferring, even after a certainty of success, to defer dividends, by making the product of the mine furnish its own resources. But, in the mean time, there has been developed an energy not less indomitable than has been exhibited in the final successful establishment of many other industrial enterprises. The difficulties of navigation have disappeared since the opening of the St. Mary's ship canal, and of the entry into Portage Lake. The problems of machinery and labor are being rapidly solved. The comforts of a refined civilization are increasing with the extraordinary growth of population, so that with a prospect of 7,500 to 8,000 tons of ingot copper for 1861, even at an average price less than that of 1860, there is much encouragement in the future.—*L. S. Miner.*

FRENCH WINES.

The *Aigle de Toulouse* publishes a decree from the Minister of Finance, extending to all France the permission to mix alcohol with wines intended for exportation. Hitherto only certain departments possessed the privilege, which has been frequently solicited by the Chamber of Commerce of Toulouse and the wine-growers of the Haute Garonne. The decree provides that the addition of the alcohol must always be made in the presence of government officers, who are to take note of the natural strength of the wines and of the quantity of alcohol added.

FLAX COTTON.

The Fibrilia Felting Company, organized under the general laws, have issued their legal notices, from which we condense the following: This corporation is formed to carry on the business of manufacturing flax, hemp, jute, China grass, silk, wool, cotton and like fibrous substances in the various forms of manufacture necessary for yarns, cloth and felt, as well as the bleaching and coloring the same. The capital stock is $10,000, which has been paid in, and has been expended in the purchase of machinery, patent rights, &c., for carrying on the business. The par value of each share is $100, and the business is carried on in Winchester, Middlesex county. Stephen M. Allen is President, Geo. L. Fall is Treasurer; and they, with S. P. White, are the Directors.

NEW MINERAL DISCOVERIES IN CALIFORNIA.

A recent number of the San Francisco *Alta California* furnishes accounts of new and extraordinary rich veins of gold and silver ore that have lately been brought to light in the eastern slope of the Sierra Ne-

vada range. Mines that bid fair to equal, if not surpass, any thing known in the history of California, are now being opened up in Mariposa and Tulare counties, in the southeastern section of the State. In the Coso district, in the eastern portion of Tulare county, the gold and silver ores have assayed at the rate of $1,500 to $6,000 per ton, from pieces chipped off from the weather-worn outcroppings with sledge-hammers, crowbars, &c. But as if this were not enough to excite the cupidity of lucre-loving humanity, a startling discovery of gold and silver bearing antimonial ore has recently been made, specimens of which have been assayed at San Francisco, and yield the astonishing amount of more than *sixteen thousand dollars to the ton!* This extraordinary "lead" is in the hands of parties who, naturally enough, do not court publicity in regard to the locality of their splendid prize. Besides these dazzling discoveries, the Mono Lake district, which is located at the junction of Calaveras, Mariposa and Fresno counties, is known to be a prolific field for mining operations, both in silver and gold: while it has been demonstrated that the vast mountains of quartz which comprise the great portion of Mariposa county, known for their prolific gold yield, are even richer in silver. A richer vein of silver has been traced across the northeastern section of Mariposa county, on both sides of the mountain range, which leads to the belief that it is the initiative of a vast bed of silver ore on the west side of the Sierra. In Calaveras county numerous discoveries of extraordinary richness have been made, and it is further stated that discoveries have been made as far east as the Mohave and Colorado rivers, which promise to be of vast importance.

The silver lead in Mariposa county has a somewhat romantic history, as told by the *Alta:* "This silver lead, it is stated, was discovered in 1856, but the discoverer was unaware of its nature until last winter. In his wanderings about Mariposa, where he mined, he at different times prospected, carefully marking the rock he returned with. In 1856, while hunting, he discovered what he thought to be a lead mine. He pocketed the prospect, but thought it of no value in comparison with gold. In 1858 he went east to visit his relatives, taking with him his collection of minerals and gold specimens. Last Februrary he saw a specimen of Washoe ore at W. T. Coleman & Co.'s, in Wall-street, and remarking the resemblance to his lead specimen, procured a piece to compare with his own. He was so well satisfied that they were identical in nature that he had each assayed, and his 'lead specimen' proved to be rich silver ore. Keeping his own counsel he returned to California last spring, and has spent the intervening time in retracing his footsteps over the chemical and chaparral hills of Mariposa, and his investigations have resulted in his discovery as above named."

Mining and scientific parties are now engaged in exploring these new mineral regions, and the stream of adventurers is already setting eastward, across the Sierras, from the southern country, and next spring and summer that whole region will be filled up with eager treasure-hunters.

From these new discoveries California derives additional resources and importance. Fresh streams of emigration will pour into the State, and new and increased impetus will be imparted to its industrial and commercial activity, while the commerce of the world will be stimulated by the increased production of the precious metals.

FOREIGN CORRESPONDENCE

OF THE MERCHANTS' MAGAZINE AND COMMERCIAL REVIEW.

LONDON, *July 1st*, 1861.

To the Editors of the Merchants' Magazine:

I CANNOT, I think, do better than proceed at once to put your readers in possession of an opinion advanced to me the other day by a leading public man, who has been out and in Downing-street for nearly half a century.

He says that, *in any eventuality*, England will not go to war with the Federal government, as war is not desired by any class of politicians nor by the mass of the English people; secondly, because no present necessity exists for it on the plea of cotton; and, in the third place, should the war not be ended before the present English stock of cotton fails, it is not improbable that the Federal government, while vigorously carrying on the war with the Confederate States, would permit cotton to be exported from New-Orleans, rather than to provoke war with a foreign power. Such is the view of the American question as taken by one of the foremost men in England; and when submitted to your readers it will be as fresh and assuring as if submitted to them to-day.

From all that I can see and hear and read, there is but the one conclusion to which I am forced, namely, that the present British government have no American policy whatever, and that the conservative opposition are in precisely the same state. The conservatives will do nothing and say nothing to involve the whigs in war, and were the whigs unhappily to become involved in war, the conservatives would condemn their policy, and do their best to carry an adverse vote against the government. Were the government to be upset on any question, between now and the end of the session, and the conservatives to take office and go to war with the Federal government, I firmly believe that the first act of Lord PALMERSTON'S party opposition would be to condemn the war policy of Lord DERBY, and try to regain office on the strength of such opposition. Whig and Tory are conscientiously opposed to engaging in the present struggle; and, notwithstanding speeches in Parliament and articles in newspapers, you may feel perfectly easy as to the attitude this country will assume, or the course which its statesmen of any party may choose to take. If you can see your way by and by to a regulated cotton trade, through the Upper Mississippi and the New-York railways, if not from New-Orleans, JOHN BULL will be the close and faithful ally of the North, during at least the whole of Mr. LINCOLN'S presidential term.

Passing from this unusual but highly important topic, the next important subject is the harvest prospects of the United Kingdom. These were never more satisfactory, and the probability is that a larger quantity

will this year be harvested than was ever known in this country. Last fall, as your readers will remember, was the only good part of the English season; and winter wheat was put into the ground under the best auspices. An unusually severe winter followed, not severe enough to kill the young shoots, but sufficiently so to make them more healthy than was ever known. A genial spring, neither too wet nor too dry, and a warm summer, has since brought them into ear; and a few weeks more of such weather is only wanted to provide abundantly, almost from the home supply alone, enough for man and beast. High prices are not therefore to be looked for here by your New-York receivers or by the Buffalo or Chicago commission houses. With good weather a very low level of prices will be established, and very likely it will be maintained throughout the year. The time was when good spring wheat flour brought no more than $4 or $4 50 in Liverpool, and you may now expect that such times are again at hand.

Shipping matters, in which I am glad to find you take great interest, now politically do not engage attention. Since Mr. LINDSAY'S return from the United States he has never said in Parliament a word on the subject; and no question has ever been addressed to him or to Mr. MILNER GIBSON as to the mission in which he ambitiously engaged. The fact is, the House of Commons is thoroughly disgusted with the so-called shipping question, it having been kept before the public by a clique of old-fashioned gentlemen, whose opinions on commercial classes generally are obnoxious to the masses. Any little popularity which Mr. LINDSAY has, which, by the way, is not much, has been gained by popular appeals against this clique; and, very oddly as it may appear to you, while Mr. LINDSAY was making his American tour and enlightening the members of the New-York Chamber of Commerce among the rest, an individual formerly attached to the staff of the *Morning Chronicle* sent around circulars to all the members of the House of Commons and the House of Lords, claiming to have written all the speeches which, during the past years, have been delivered by Mr. LINDSAY, and claiming still further to be the author of all MR. LINDSAY'S published works. Whether this painful revelation has kept Mr. LINDSAY from taking a prominent part in the business of the session and shut him up on the subject of his American mission, I cannot say, but it is a fact, that up to this time his mission has not once been named in Parliament. With the vexed question of shipping grievances nothing whatever has yet been done, and the proposition to abolish passing tolls, at once embodied in the Harbors Bill, introduced by Mr. MILNER GIBSON, is not likely to be favorably entertained by the House of Lords, even if it should pass the third reading in the House of Commons. Among those ship-owners who speak out at all, it is said, *why advance another step in the way of the freedom of shipping until the United States and France and other countries make equivalent concessions to those granted to the flags of all nations in the British foreign and coasting and colonial trades?* This sentiment also finds expression to some extent in Parliament, and if not sufficiently strong in the lower house to reject Mr. MILNER GIBSON'S bill, it is, as I have just said, all but sure to be found strong enough in that house, in which free trade is still distrusted.

In dealing with financial matters I cannot, perhaps, do better than give you a *resumé* of the weekly features of the month. During the

week ending 1st June, the discount market was moderately easy, the rates in Lombard-street ranging from 5½ to 5⅝ per cent. for choice bills, or ⅛ to ¼ below the bank minimum. The following were the rates current in the principal continental cities:

Bank rate.		*Open market.*		*Bank rate.*		*Open market.*	
Paris,.....	5 per cent. ..	4½	per cent.	Frankfort,..	3 per cent. ..	2	per cent.
Vienna, ...	5 " ..	6	"	Brussels,...	3 " ..	3	"
Berlin.....	4 " ..	3½	"	Turin,.....	6 " ..	5½	"
Amsterdam,	3 " ..	3	"	Hamburgh,.	none. ..	2½	"

The monthly Board of Trade returns for April were published in the course of the week, and the official statements of the exports and imports to and from the United States for the first quarter were as follow:

	Exports.		*Imports.*
1859,.....	£ 6,202,943	....	£ 6,901,609
1860,.....	5,822,109	....	11,084,113
1861,.....	4,026,679	....	13,834,051

The minimum rate of the Bank of England was 6 per cent.; the rate allowed for deposits by the London joint-stock banks, 4½ per cent.; the rate allowed by the London discount establishments, 4½ per cent. for money on call, and 5 per cent. at seven days' notice; Consols, 91⅞ to 92; French 3 per cent. rentes, 69.40; Bank of France rate of discount, 5 per cent.

For the week ending 8th June the money market was more stringent. At the Bank of England business was done to a considerable extent at the minimum rate of 6 per cent., and in the open market the same rate was charged for good 60 day bills. Consols and French rentes declined slightly in the week, the closing prices for the former, ex-dividend, being 89¾ to 89⅞ and 89; the latter, 67.70 for money and the same for the account. The rates allowed for deposits by the London joint-stock banks was 4½ per cent.; by the London discount establishments, 4½ per cent. at call, and five per cent. at seven days' notice. The Bank of France rate of discount, 5 per cent.

For the week ending 15th of June there was no perceptible change in either the London or Paris money markets. The monthly return of the Bank of France give the following changes:

Coin and bullion, increase, £800,000; bills discounted, decrease, £20,000; notes in circulation, decrease, £1,240,000; private deposits, increase, £1,240,000; treasury deposits, increase, £160,000; advances on public securities, decrease, £220,000.

Three per cent. rentes gained ¼ per cent. in the week, and closed at 67.90 for money and 67.95 for the account. Consols also gained and closed at 90 to 90⅛ for money, ex-dividend, and 90⅜ to 90½ for the account, ex-dividend. The demand for money at the Bank of England was moderate. In Lombard-street the minimum bank rate of 6 per cent. was charged for the best bills; in the open market the same rate was charged. The London joint-stock banks continue to allow 4½ per cent. for deposits; the London discount establishments, 4½ per cent. at call, and 5 per cent. at seven days' notice. The Bank of France rate of discount remained at 5 per cent.

For the week ending 22d June three per cents on the Paris Bourse

declined from $\frac{1}{8}$ to $\frac{1}{4}$ per cent.; Consols were also lower, the quotations of the latter being $89\frac{3}{8}$ to $89\frac{3}{4}$ for money, ex-dividend, and 90 to $90\frac{1}{8}$ for the account, ex-dividend. The minimum rates of the Bank of England and the Bank of France were unchanged, the former standing at 6 per cent. and the latter at 5 per cent. In the open London market good sixty day bills, $5\frac{3}{4}$ to 6 per cent. The London joint-stock bank rates unchanged for deposits.

For the week ending 29th June the rate of discount in the open market at Paris was $4\frac{3}{4}$ per cent.; at Vienna, 6; Hamburgh, $2\frac{3}{4}$; Brussels, 4; Berlin, $3\frac{1}{2}$; Frankfort, 2; Turin, $6\frac{3}{4}$, and Amsterdam, 3 per cent. In Paris the Bank of France rate remained at 5 per cent., and in London, the Bank of England rate at 6 per cent. In the open London market 6 per cent. was charged, and the rates on deposits continued as before.

Attention was directed to the sound state of English railways, which is apparent at a glance of the following table:

In 1851 Caledonians were at	20,	now at	$97\frac{1}{4}$
In 1848 Great Northerns were at	40	"	$107\frac{1}{4}$
In 1851 Lancashires were at	46	"	$111\frac{1}{2}$
In 1850 Midlands were at	31	"	121
In 1850 North British were at	16	"	63
In 1854 Berwicks were at	61	"	$104\frac{1}{2}$
In 1850 Scottish Centrals were at	40	"	$114\frac{1}{2}$

The Board of Trade returns for May, and for the five months of the year, have been published, and the exports are as follow:

Year.	*For the month.*		*For the five months.*
1859,	£ 10,485,744	....	£ 52,337,268
1860,	10,949,138	....	52,783,535
1861,	11,206,070	....	49,780,532

The other side of the account the imports foots up a large balance against the United Kingdom:

Year.	*For the month.*		*For the five months.*
1859	£ 10,109,092	....	£ 33,407,156
1860,	13,679,301	....	42,410,364
1861,	17,509,940	....	51,821,567

The failures for the month have been numerous. Among the number, Messrs. James Duncan & Co., of Dundee, who attribute their failure to the stoppage of the American trade; Messrs. T. Fish & Co., manufacturers, Manchester; Messrs. B. Wild & Co., Manchester, in the American trade; Messrs. Churchill & Macmellan, timber brokers, Cannon-street, London; Messrs. D. & J. Thomson & Co., jute spinners and manufacturers, Dundee; Messrs. F. Atkin & Co., merchants, Manchester.

Trade in the manufacturing districts continues quiet and contracted. So far there is nothing like pressure yet experienced, but the present stock of cotton on hand will not carry the cotton spinners into the next year at the present rate of working up.

Some particulars with regard to the movement of cotton in Liverpool during the last two months will no doubt be acceptable to your readers. At the commencement of April the stock amounted to 942,000 bales, being 36,000 bales more than the quantity held at the corresponding date in 1860; but during the last two months it will be seen that this

excess has been more than lost. Last year's deliveries, however, were on a very free scale, the crop of the preceding season having been remarkably abundant:

Stock.	1861. bales.	1860. bales.	Stock.	1861. bales.	1860. bales.
April 26,.....	952,740	1,027,290	May 31,.....	1,151,010	1,295,570
May 3,.....	900,690	1,016,630	June 7,.....	1,148,650	1,358,620
May 10,.....	976,810	1,027,130	June 14,.....	1,131,080	1,335,040
May 17,.....	1,049,590	1,111,260	June 21,.....	1,116,860	1,307,835
May 24,.....	1,111,510	1,200,730			

The proportions in which the stocks were made up, at the first and last dates mentioned, were as follow:

	Stock, April 26. bales.	*Stock, June 21.* bales.		*Stock, April 26.* bales.	*Stock, June 21.* bales.
America,.....	776,260	843,930	Egyptian,.....	42,970	48,240
Pernambuco,.....	8,569	8,430	Common West India,	2,540	1,630
Bahia,.....	70	3,540	Surat,.....	115,620	193,030
Maranham,.....	6,790	8,070			

It will be observed, that, notwithstanding the prospect of diminished American supplies, the stock of Surat is accumulating; in fact, it is only kept down by reshipments to Russia, Germany and Sweden.

London, on Saturday evening, the 22d June, was visited by one of the most terrific conflagrations that probably had occurred since the great fire in 1666; certainly, for the amount of property destroyed, nothing like it has been experienced the last half-century, the loss being estimated at three millions or more.

This catastrophe occurred on the waterside portion of Tooley-street, nearest London Bridge. The outbreak took place at the extensive range of premises known as Cotton's Wharf, and bounded by warehouses belonging to Messrs. Scovell. They had an extensive river frontage, and the whole space on the land side, extending to Tooley-street, was covered with eight or nine massive brick warehouses, six stories in height, the whole occupying an immense area. These buildings were filled with merchandise of every description. There were some thousands of chests of tea and silk stored in the upper floors, while in the lower ones there was an immense stock of Russian tallow, various oils, bales of cotton, hops and grain. Every portion of the entire establishment might be said to have been loaded with goods; and of the whole of this very valuable property, said to be valued at upwards of a million, not a vestige remains but the bare walls and an immense chasm of fire, which, at dusk on Sunday evening, lighted up the Pool and the east end of the city.

From London Bridge there is now very little to be seen beyond heaps of blackened wreck and skeleton walls. The vaults and mounds of ruin over the whole surface of the wide area of destruction are fast cooling down. A fresh outbreak, which took place in a vault on Hay's Wharf, was speedily got under. A quantity of hides has been recovered from among the wreck on Hay's Wharf, and on Chamberlain's Wharf great progress was made towards the recovery of 150 tons of spelter, which has received little or no injury.

The destruction of property and goods proves to be more enormous

than was previously calculated upon; and, by practical men of business, and also by competent judges, the loss is not put down under £4,000,000 sterling. This serious amount will fall principally on four of the London insurance companies. The insurance companies, it is understood, are about to raise the rates of insurance on fire policies, and have already done so in some instances, by 50 per cent.

Great efforts are making to enlarge the steam commerce between England and America. On the afternoon of the 25th June, the steamship SCOTIA, the second iron paddle-wheel liner built by the orders of Messrs. BURNS for the CUNARD or British and North American Royal Mail Steam Packet Company, was launched from the building-yard of Messrs. ROBERT NAPIER & SONS, at Govan, near Glasgow. The weather was rather unfavorable, yet an immense concourse of spectators assembled to witness the event. The SCOTIA, which is somewhat larger than the PERSIA, is the second vessel in point of magnitude and capacity that has hitherto been constructed for mercantile service. From the adaptation by the builders of every improvement and scientific auxiliary, the SCOTIA is expected to attain a very high degree of speed, and no doubt is felt that she will, in ordinary circumstances, perform the voyage between New-York and Liverpool in nine days.

Excepting the GREAT EASTERN, the SCOTIA is the largest mercantile steamship afloat in the world, far exceeding in length, strength, tonnage and steam-power the other vessels of the line, and exceeding by 760 tons the tonnage of the PERSIA, and by 1,900 tons the internal capacity of any other of the present splendid CUNARD liners. Her chief proportions may be summed up as follows:

Length of keel and forerake,	360 feet.
Length over all,	400 "
Breadth of mould,	47 "
Depth,	32 "

The report of the joint committee of the Board of Trade to inquire into the best form of covering for submarine telegraph cables has just been issued. Up to the present time 11,364 miles have been laid, but only about 3,000 are actually working. The lines not working include the Atlantic, 2,200 miles, the Red Sea and India, 3,499 miles, the Sardinia, Malta and Corfu, 700 miles, and the Singapore and Batavia, 550 miles. The committee give a succinct history of these, as well as of all the others, and state their conclusions. The failure of the Atlantic is attributed to "the cable having been faulty, owing to the absence of experimental data, to the manufacture having been conducted without proper supervision, and to the cable not having been handled after manufacture with sufficient care;" and they add that "practical men ought to have known that the cable was defective, and to have been aware of the locality of the defects before it was laid." The committee recommend the construction of a vessel specially for the purpose, which they believe, when not employed in laying cables, would be found extremely useful for the ordinary purposes of commerce. In conclusion, they repeat their belief that the exercise of due care might have prevented all the unsatisfactory results that have thus far attended this branch of enterprise.

The Social Science Association.—The following appointments of president of the association and presidents of sections for the Dublin meeting

have been made by the London council: Lord BROUGHAM will be president of the association, and will deliver the inaugural address. The presidents of sections will be—Jurisprudence, Right Hon. JOSEPH NAPIER; Education, Sir JOHN S. LEFEVRE, K. C. B.; Punishment and Reformatories, the Right Hon. the Attorney-General; Public Health, the Right Hon. Lord TALBOT DE MALAHIDE; Trade and International Law, M. MICHEL CHEVALIER, the celebrated French economist. The time of the meeting has been fixed to be from the 14th to the 21st of August.

COMMERCIAL CHRONICLE AND REVIEW.

MEETING OF CONGRESS—FISCAL YEAR ENDED—FOREIGN IMPORTS AT NEW-YORK, JUNE, 1861—SAME, YEARS 1857-1861—HEAVY EXPORTS OF PRODUCE TO EUROPE—FOREIGN TRADE OF NEW-YORK, 1851-1861—EXPORT OF GRAIN, 1861—ESTIMATES OF REVENUE BY THE SECRETARY OF THE TREASURY—IMPORTS OF DRY GOODS AT NEW-YORK—FOREIGN AND DOMESTIC EXCHANGES—RAILROAD DIVIDENDS.

CONGRESS met on the fourth day of July. The message of the President was communicated on the following day. The report of the Secretary of the Treasury recommends numerous changes in the tariff.

The fiscal year of the federal government closed on the 30th of June, and the result is a larger business than was ever before transacted in one year. For four years the aggregates have been as follows:

	1858.	1859.	1860.	1861.
Exports,	$ 100,667,890	$ 106,443,541	$ 138,036,550	$ 150,386,522
Imports,	171,473,336	220,247,307	233,718,718	224,401,260
Total,	$ 272,141,226	$ 326,690,848	$ 371,755,268	$ 374,787,782
Duties,	27,435,000	34,910,000	37,662,000	28,223,137

The month of June shows a very moderate amount in foreign goods imported; being only $7,262,580, against a monthly average of about sixteen millions for the whole fiscal year ending June 30, 1861; and against $19,122,517 for the month of June, 1860, and $23,583,929 for June, 1859.

FOREIGN IMPORTS AT NEW-YORK FOR THE MONTH OF JUNE, 1861.

ENTERED.	1858.	1859.	1860.	1861.
For consumption,	$ 6,652,563	$ 14,909,315	$ 11,870,400	$ 1,825,563
For warehousing,	2,408,733	5,494,253	2,765,008	3,245,504
Free goods,	953,014	3,180,361	4,487,109	2,191,513
Specie and bullion,	102,132	485,891	38,272	5,387,153
	$ 10,116,442	$ 24,069,821	$ 19,160,789	$ 12,649,733

For the past six months the contrast is also remarkable, presenting features not before existing, except in the revulsion of 1857–8; the aggregate imports (exclusive of specie) for the half year being only $77,949,208, against $117,031,239 for the corresponding period of 1860; and $128,038,931 in 1859; $60,006,271 in 1858, and $115,577,415 in

the inflated year of 1857. These contrasts are more fully represented in the following table:

FOREIGN IMPORTS AT NEW-YORK FOR SIX MONTHS, FROM JANUARY 1ST.

ENTERED.	1858.	1859.	1860.	1861.
For consumption,..	$36,320,520 ..	$91,829,562 ..	$79,945,689 ..	$31,991,257
For warehousing, ..	12,236,253 ..	19,266,384 ..	20,914,902 ..	28,672,040
Free goods,.....	11,449,498 ..	16,942,984 ..	16,170,648 ..	17,285,911
Specie and bullion,	1,778,363 ..	1,125,943 ..	686,837 ..	25,909,668
Total entered,..	$61,784,634 ..	$129,164,874 ..	$117,718,076 ..	$103,858,876
Withdrawn,....	21,911,964 ..	11,515,721 ..	10,315,657 ..	19,374,096

From the above it will be seen that only $51,165,353 of dutiable goods have been thrown upon the market here since January 1st, against $94,261,346 for the same period of last year, and $103,345,284 for the same period of 1859; and the ratio is rapidly diminishing, month by month. We have compiled our usual statement, showing the imports at this port during the last fiscal year, as compared with the three previous years, showing the gross imports of goods and merchandise to have been only one hundred and ninety millions in value, or forty millions less than the year 1859–1860:

FOREIGN IMPORTS AT NEW-YORK FOR FOUR FISCAL YEARS, ENDING JUNE 30.

ENTERED.	1858.	1859.	1860.	1861.
For consumption,..	$94,019,659 ..	$158,451,780 ..	$164,881,435 ..	$106,706,066
For warehousing, .	44,463,806 ..	32,665,650 ..	38,523,572 ..	54,498,323
Free goods,.....	23,665,487 ..	27,518,177 ..	27,936,396 ..	29,121,710
Specie and bullion,	9,324,384 ..	1,611,700 ..	2,377,315 ..	34,075,161
Total entered,..	$171,473,336 ..	$220,247,307 ..	$233,718,718 ..	$224,401,260
Withdrawn,....	49,376,593 ..	27,103,299 ..	29,657,025 ..	36,162,363

If we separate the aggregate dry goods imports from the general merchandise, we find that the decrease in the importations is in dry goods and in general merchandise:

DESCRIPTION OF IMPORTS FOR THE YEAR ENDING JUNE 30.

	1858.	1859.	1860.	1861.
Dry goods,.....	$67,317,736 ..	$93,549,083 ..	$107,843,205 ..	$83,310,345
Gen'l merchandise,	94,831,216 ..	125,086,524 ..	123,498,198 ..	107,015,754
Specie and bullion,	9,324,384 ..	1,611,700 ..	2,377,315 ..	34,075,161
Total imports,..	$171,473,336 ..	$220,247,307 ..	$233,718,718 ..	$224,401,360

The exports of produce and merchandise at this port during the month of June were nearly twelve millions, a larger amount than was ever before shipped from New-York to foreign ports in a single month. During the corresponding month of last year the exports were also unusually large, both in produce and specie; but, compared with any other previous year, the gain is enormous, and it exceeds that of June in the last year, exclusive of specie, by nearly two millions:

FOREIGN EXPORTS FROM NEW-YORK FOR THE MONTH OF JUNE, 1858–1861.

	1858.	1859.	1860.	1861.
Domestic produce,.....	$6,382,939 ..	$4,880,395 ..	$8,307,774 ..	$10,270,430
Foreign merch., (free,)..	158,769 ..	126,255 ..	200,464 ..	648,482
For'gn merch., (dutiable,)	350,990 ..	187,522 ..	486,228 ..	903,877
Specie and bullion,.....	594,174 ..	7,496,981 ..	8,842,080 ..	244,242
Total exports,.....	$7,486,872 ..	$12,691,153 ..	$17,836,546 ..	$12,067,031
Total, exclusive specie,	6,882,689 ..	5,194,172 ..	8,994,466 ..	11,822,789

The total exports from New-York to foreign ports, exclusive of specie, since January 1st, are larger than for the first six months of any previous year. On the other hand, the exports of specie are less than for the same period for many years:

EXPORTS FROM NEW-YORK TO FOREIGN PORTS FOR SIX MONTHS, FROM JANUARY 1.

	1858.	1859.	1860.	1861.
Domestic produce,.....	$28,580,392 ..	$28,435,582 ..	$38,775,862 ..	$61,477,439
Foreign merch., (free,)...	782,561 ..	1,384,318 ..	1,719,475 ..	1,685,329
For'gn merch., (dutiable,)	2,280,425 ..	1,789,363 ..	3,092,509 ..	3,438,463
Specie and bullion,.....	12,359,959 ..	33,197,972 ..	21,579,752 ..	3,249,438
Total exports,.....	$44,003,337 ..	$64,807,235 ..	$65,147,598 ..	$69,850,669
Total, exclusive specie,	31,643,378 ..	31,609,263 ..	43,567,846 ..	66,601,231

It will be seen that the total, exclusive of specie, even compared with the very large figures for the corresponding period of last year, shows an increase of over fifty per cent., and, as compared with the previous year, the gain is over one hundred per cent. We now produce our comparative tables for the whole year, from which it will be seen that the largest previous exports of produce and merchandise were for the year ending June 30th, 1857, when the total was about eighty-two millions; it will be seen, therefore, that the total for the twelve months just ended was forty-five millions larger than for any former year in the history of the trade. In consequence of the disturbed condition of the South and West, a large amount of produce will be diverted from other channels to this port, but the natural outgoes to foreign ports can hardly be as large during the next twelve months as they have been in the year just closed. Even if the same quantity were to be shipped, the total value must be greatly diminished by the falling off in price. The business of the coming year depends largely upon the results of the English harvest.

IMPORTS OF FOREIGN DRY GOODS AT NEW-YORK FOR THE FISCAL YEAR ENDING JUNE 30.

Entered for Consumption.

MANUFACTURES OF	1858.	1859.	1860.	1861.
Wool,.....	$17,035,032 ..	$28,275,434 ..	$31,437,083 ..	$21,311,212
Cotton,.....	9,012,911 ..	19,003,825 ..	18,339,131 ..	7,613,005
Silk,.....	17,581,099 ..	26,740,909 ..	33,683,706 ..	22,080,682
Flax,.....	3,701,555 ..	8,583,246 ..	8,548,281 ..	3,944,214
Miscellaneous,.....	3,761,788 ..	4,890,755 ..	5,469,601 ..	4,806,586
Total,.....	$51,092,385 ..	$87,494,169 ..	$97,477,801 ..	$59,755,699

Withdrawn from Warehouse.

MANUFACTURES OF	1858.	1859.	1860.	1861.
Wool,.....	$6,369,118 ..	$3,245,046 ..	$3,388,431 ..	$5,589,542
Cotton,.....	4,018,693 ..	1,750,716 ..	2,466,919 ..	3,968,671
Silk,.....	5,394,970 ..	1,308,739 ..	1,396,011 ..	3,841,430
Flax,.....	2,215,427 ..	1,292,722 ..	911,214 ..	1,581,324
Miscellaneous,.....	1,385,173 ..	789,773 ..	635,293 ..	808,507
Total,.....	$19,383,381 ..	$8,387,046 ..	$8,497,868 ..	$15,789,474
For consumption,...	51,092,385 ..	87,494,169 ..	97,477,801 ..	59,755,699
Total on market,..	$70,475,766 ..	$95,881,215 ..	$105,975,669 ..	$75,545,173

Entered for Warehousing.

Manufactures of	1858.	1859.	1860.	1861.
Wool,	$5,028,533	$2,647,814	$3,981,742	$7,376,464
Cotton,	4,048,530	1,416,143	2,929,175	6,444,136
Silk,	3,667,521	776,862	1,778,646	5,746,806
Flax,	1,964,891	719,606	904,693	2,679,161
Miscellaneous,	1,515,876	494,489	771,147	1,308,079
Total,	$16,225,351	$6,054,914	$10,365,404	$23,554,646
For consumption,	51,092,385	87,494,169	97,477,801	59,755,699
Entered at the port,	$67,317,736	$93,549,083	$107,843,205	$83,310,345

In order to distinguish the dry goods from the general imports, we have compiled a table which gives at a single glance the whole imports of dry goods for the year, compared with the preceding three years:

Imports of Dry Goods at New-York for the Year ending June 30.

Manufactures of	1858.	1859.	1860.	1861.
Wool,	$22,063,565	$30,923,248	$35,418,825	$28,687,676
Cotton,	13,061,441	20,419,968	21,268,306	14,057,141
Silk,	21,248,620	27,517,771	35,462,352	27,827,488
Flax,	5,666,446	9,302,852	9,452,974	6,623,375
Miscellaneous,	5,277,664	5,385,244	6,240,748	6,114,665
Total imports,	$67,317,736	$93,549,083	$107,343,205	$83,310,345

The total cash duties received at New-York for the past five fiscal years have been $170,540,990, an average of about thirty-four millions of dollars, viz.:

1856–7,	$42,271,645
1857–8,	27,434,667
1858–9,	34,899,800
1859–60,	37,711,740
1860–61,	28,223,137

In order to illustrate the commerce of the State for ten years, we republish the tabular returns of domestic and foreign produce exported, the imports, and the increase of tonnage for each year, 1850—1860:

Foreign Commerce of the State of New-York, from July 1, 1850, to July 1, 1860.

	Exports.			Imports.	Tonnage Cleared.	
Years.	*Domestic.*	*Foreign.*	*Total.*	*Total.*	*American.*	*Foreign.*
1851,	$68,104,542	$17,902,477	$85,007,019	$141,546,538	$1,588,313	$878,819
1852,	74,042,581	13,441,875	87,484,456	182,329,306	1,570,927	906,793
1853,	66,030,355	12,175,935	78,206,290	178,270,999	1,959,902	1,084,742
1854,	105,551,740	16,982,906	122,534,646	195,427,933	1,918,317	1,035,154
1855,	96,414,808	17,316,430	113,731,238	164,776,511	1,861,682	1,140,197
1856,	109,848,509	9,262,991	119,111,500	210,162,454	2,136,877	1,385,577
1857,	119,197,301	15,605,997	134,803,298	236,493,485	2,188,670	1,405,211
1858,	89,039,790	19,301,134	108,340,924	178,475,736	2,152,835	1,182,568
1859,	104,726,546	12,813,279	117,539,825	229,181,349	2,554,134	1,276,706
1860,	126,060,967	19,494,482	145,555,449	248,489,877	3,383,535	1,190,750
Total,	$959,017,189	$154,297,506	$1,113,314,645	$1,915,154,188	$21,315,192	$11,436,517

RECAPITULATION OF FOREIGN COMMERCE OF NEW-YORK AND THE UNITED STATES FOR FIVE YEARS, AND THE PER CENTAGE OF NEW-YORK TO THE WHOLE.

YEAR.	*Imports State N. Y.*	*Other States.*	*Total U. S.*	*Per Cent.*
1855—1856,.....	$ 210,160,454 ..	$ 104,479,468 ..	$ 314,639,922 ..	66.79
1856—1857,.....	236,498,485 ..	124,396,656 ..	360,890,141 ..	65.53
1857—1858,.....	178,475,736 ..	104,137,414 ..	282,613,150 ..	63.15
1858—1859,.....	229,181,849 ..	109,586,781 ..	338,768,130 ..	67.65
1859—1860,.....	248,489,877 ..	118,676,377 ..	362,166,254 ..	68.61
Five years,.....	$ 1,102,800,901 ..	$ 556,276,696 ..	$ 1,659,077,597 ..	....
Average, five years,	220,560,180 ..	111,255,339 ..	331,815,519 ..	66.40

YEAR.	*Exports State N. Y.*	*Other States.*	*Total U. S.*	*Per Cent.*
1855—1856,.....	$ 119,111,500 ..	$ 207,853,408 ..	$ 326,964,908 ..	36.43
1856—1857,.....	184,803,293 ..	228,157,384 ..	362,960,682 ..	37.14
1857—1858,.....	108,340,924 ..	216,303,496 ..	324,644,420 ..	33.37
1858—1859,.....	117,589,825 ..	239,249,637 ..	356,789,462 ..	32.94
1859—1860,.....	145,555,449 ..	254,566,847 ..	400,122,296 ..	36.38
Five years,.....	$ 625,350,996 ..	$ 1,246,130,772 ..	$ 1,771,481,768 ..	....
Average, five years,	125,070,199 ..	249,226,154 ..	384,296,353 ..	35.26

The foreign export of wheat from this port to Great Britain, since 1st September last, has been over seventeen millions bushels. We extract the following from EDWARD BILL'S flour and grain circular:

FROM—	*Bbls. Flour.*	*Bbls. Corn Meal.*	*Bush. Wheat.*	*Bush. Corn.*
New-York, to July 12,....	1,547,657 ..	2,815 ..	17,825,883 ..	6,326,927
New-Orleans, to June 14,....	179,427 ..	996 ..	66,767 ..	1,464,267
Philadelphia, to July 4,....	173,894 ..	.... ..	1,433,803 ..	695,628
Baltimore, to July 4,....	127,031 ..	48 ..	947,346 ..	853,200
Boston, to July 5,....	96,081 ..	106 ..	13,032 ..	14,100
Other ports, to June 28,....	128,470 ..	.... ..	2,236,192 ..	15,451
Total since 1st Sept., 1860,...	2,252,560 ..	3,965 ..	22,523,023 ..	9,369,573
Same period, 1860,.....	443,245 ..	651 ..	2,383,369 ..	2,063,592
" 1859,.....	91,230 ..	58 ..	415,800 ..	342,013
" 1858,.....	1,163,148 ..	143 ..	5,847,159 ..	3,274,676

TO THE CONTINENT FROM—	*Bbls. Flour.*	*Bush. Wheat.*	*Bush. Corn.*	*Bush. Rye.*
New-York, to July 2, 1861,..	54,276 ..	1,760,489 ..	41,023 ..	124,116
Other ports, to latest dates,..	7,796 ..	9,073 ..	3,042 ..	....

Freights to English ports have checked the export demand, viz.: To Liverpool, 2*s.* 10½*d.* @ 3*s.* per bbl. on flour, and 9 @ 10¼*d.* per bush. on grain; to London, 3*s.* 6*d.* on flour, and 10½ @ 11¼*d.* on wheat; to Glasgow, 3*s.* 3*d.* on flour, and 10½*d.* on wheat; to France, 18*c.* on wheat.

EXPORTS FROM NEW-YORK TO FOREIGN PORTS FOR THE FISCAL YEARS ENDING JUNE 30.

	1858.	1859.	1860.	1861.
Domestic produce,....	$ 55,931,987 ..	$ 53,894,893 ..	$ 70,249,811 ..	$ 118,189,900
Foreign merch., (free,)	3,104,160 ..	2,202,868 ..	3,335,038 ..	6,111,200
" (dutiable,)	7,309,672 ..	3,596,336 ..	6,354,055 ..	2,224,600
Specie and bullion,....	34,322,071 ..	46,839,444 ..	58,097,646 ..	23,860,800
Total exports,.....	$ 100,667,890	$ 106,443,541	$ 138,036,550	$ 150,386,500
" exclusive of specie,	66,345,819	59,604,097	79,938,904	126,525,700

The message of Secretary CHASE to Congress contemplates an aggregate expenditure by the general government of $320,000,000 for the year. Of this sum, it is proposed to raise $80,000,000 by the tariff and the ordinary receipts of the Treasury, and $220,000,000 by loans and treasury notes.

I. Three year treasury notes or exchequer bills, bearing 7.30 per cent. interest, for the convenience of calculation, or two cents per day for each hundred dollars, or twenty cents per day for each thousand dollars; this interest payable semi-annually. It is thought that this mode of loan may become a popular measure, by distributing it in small sums among the people, to the extent of one hundred millions of dollars.

II. A thirty year funded stock, inscribed or coupon bonds, bearing seven per cent. interest, in sums of $500, $1,000 and $5,000, not to exceed one hundred millions of dollars, including sterling bonds in sums of £100, £500 and £1,000.

III. Treasury notes to the extent of twenty millions of dollars, in sums of ten and fifty dollars, for general circulation.

The Secretary proposed to Congress that a duty of 2½ cents per pound be laid on brown sugar, of 3 cents per pound on clayed sugar, of 4 cents per pound on loaf and other refined sugars, of 2½ cents per pound on the syrup of sugar cane; of 6 cents per pound on candy; of 6 cents per gallon on molasses, and of four cents per gallon on sour molasses; and it is also proposed that a duty of 5 cents per pound be imposed on coffee; 15 cents per pound on black tea, and 20 cents per pound on green tea. From these duties it is estimated that an additional revenue of not less than $20,000,000 annually may be raised, while the burden of this revenue upon our own people will be to some considerable degree mitigated by participation on the part of the foreign producers.

IV. Treasury notes, of $10 and $20, payable one year from date, bearing an interest of 3.65 per cent., or one cent per day per hundred dollars, convertible into treasury notes or exchequer bills, bearing 7.30 per cent. or on demand in coin. The aggregate not to exceed $50,000,000.

The dividends on rail-road shares, payable in July at Boston, were $1,150,156, viz.:

STOCKS. RAIL-ROAD COMPANIES.	*Capital.*	DIVIDENDS. *Jan.*, 1861.	DIVIDENDS. *July*, 1861.	*Amount July*, 1861.
Berkshire Rail-Road,	$ 320,500	1¾	1¾	$ 5,609
Boston and Lowell,	1,830,000	4	3	54,900
Boston and Maine,	4,155,700	4	3½	145,450
Boston and Providence,	3,160,000	4	4	126,400
Boston and Worcester,	4,500,000	4	4	180,000
Fitchburg,	3,540,000	3	3	106,200
Eastern,	2,853,400	2	2	57,068
Eastern, in New-Hampshire,	492,500	2	2	9,850
Metropolitan, (horse,)	600,000	5	3	18,000
Middlesex, (horse,)	348,000	4	4	13,920
New-Bedford and Taunton,	500,000	3	3	15,000
Old Colony and Fall River,	3,015,100	3	3	90,453
Pittsfield and North Adams,	450,000	3	3	13,500
Providence and Worcester,	1,600,000	4	4	64,000
Stoughton Branch,	84,500	4	3	2,562
Taunton Branch,	250,000	4	4	10,000
Waltham and Watertown,	20,000	4	4	800
Western,	5,150,000	4	4	206,000
Worcester and Nashua,	15,222 shares,	$2½	$2	30,444
Total at Boston,				$ 1,150,156

The following is a recapitulation of rail-road and other dividends payable at Boston in July:

Miscellaneous,.....	$217,191 ..	Manufacturing dividends,..	$545,900
Interest on bonds,.....	439,984 ..	Rail-road dividends,.....	1,150,156
Total for July, 1861,.....	$2,353,231 ..	Total for January, 1860,..	$2,962,891
do. Jan., 1861,.....	3,049,710 ..	do. July, 1859,..	2,270,736
do. July, 1860,.....	3,088,759 ..	do. January, 1859,..	2,435,342

The Bank of Commerce received instructions in June to pay, when due, the July coupons on the three millions Missouri State bonds issued to the Hannibal and St. Joseph Rail-Road Company. These bonds were issued under stringent restrictions, and, in case of default on the part of the company, the State authorities have the right to foreclose the road, they being a first mortgage on the entire line. The first mortgages of the Hannibal and St. Joseph Rail-Road Company are a lien, simply, on a million of acres of land. The company have also an issue of second mortgage bonds which is a second lien on the line.

The Secretary of the Treasury, in his communication to Congress, under date July, 1861, examines closely the sources of revenue for the coming year. His estimates are as follow for increased duties on sugar, molasses, tea and coffee:

	Estimated Consumption, 1860.	*Duty.*
2½ cents on foreign sugar,.....	300,000 tons, ..	$16,800,000
6 cents per gallon on molasses,.....	28,000,000 gallons, ..	1,680,000
15 cents per lb. on black tea,.....	13,800,000 lbs. ..	2,070,000
20 cents per lb. on green tea,.....	16,300,000 lbs. ..	3,260,000
5 cents per lb. on coffee,.....	180,000,000 lbs. ..	9,000,000
Total on sugar, tea and coffee,.....		$32,810,000

Allow for the large stock on hand, on which no duty will be realized, and for diminished consumption owing to the increased duty and the troubles at the South, the revenue this year may be estimated, as Secretary CHASE states, at twenty millions of dollars.

The duties above stated are		$32,810,000
Direct tax, about		21,000,000
Real property,.....	$11,272,053,881	
Personal property,.....	4,830,880,235	
Total United States,.....	$16,102,934,116	

Omitting the seceding States, the amount is as follows:

Real property,.....	$7,630,530,603
Personal property,.....	3,270,227,404
Total,.....	$10,900,758,007

The direct tax on these amounts would be as follows:

One-eighth of one per cent. on $16,102,934,116,.....	$20,128,667
Or, one-fifth of one per cent. on $10,900,758,007, property in the non-seceding States,.....	21,800,056
Or, 30-100 of one per cent. on $7,630,530,603, real property only,...	22,891,590

In other words, the tax of 12½ cents per hundred dollars on the whole real and personal estate of the country would be $20,128,000. Or, twenty cents per hundred dollars on the gross value, excluding the seceding States, would be $21,800,000. Or, thirty cents per hundred dollars on the real property alone, $22,891,000.

One of the three bases will probably be adopted, whereby a revenue exceeding twenty millions may be realized. There is no reason, however, why the South should be exempt. The Southern States must contribute, first or last, their due proportion of the direct tax.

The public debt on the 1st of July, 1861, was $90,867,828, or less than three dollars per *capita* of the whole population of the United States.

The Sugar Trade.—The Secretary of the Treasury proposes a duty of 2½ cents per pound on brown sugar; 3 cents on clayed sugar; 4 cents on loaf and refined; 2½ cents on syrup; 6 cents on candy, and 6 cents per gallon on molasses. The stock of sugar on hand on 1st July, 1861, was larger than for some years:

STOCK OF SUGAR AT THE FOUR PRINCIPAL PORTS.

STOCK IN	*Hhds.* *Foreign, of 1,400 lbs.*	*Hhds.* *Domestic, of 1,100 lbs.*	*Melado, hhds. 1,400 lbs.*	*Boxes, of 450 lbs.*	*Bags, as per Specifications.*	*Java, Boxes, of 600 lbs.*
New-York,	71,346	4,052	7,426	25,025	190,290	190
Boston,	8,596	....	166	9,328	144,033	4,315
Philadelphia,	9,943	261	....	4,181	8,980	....
Baltimore,	3,398	1,051	40	2,379	45,888	....
Total, July 1st,	93,283	5,364	7,632	40,913	389,191	4,505

The stock of sugar on hand July 1st, 1861, compared with previous years, was as follows:

	TOTAL TONS.			
	1861.	**1860.**	**1859.**	**1858.**
New-York,	64,390	62,917	59,865	29,237
Boston,	13,613	9,365	9,239	5,995
Philadelphia,	7,784	4,965	7,936	1,698
Baltimore,	5,353	5,922	6,618	2,714
	91,140	33,169	83,658	39,644

The imports of foreign and domestic sugars for four years, January to June, (six months,) were as follow:

	TOTAL OF THE FOUR PORTS.			
MONTHS.	**1861.**	**1860.**	**1859.**	**1858.**
January, ...tons,	9,877	8,833	13,141	11,703
February,	20,174	18,497	20,247	18,498
March,	41,433	31,167	38,277	32,894
April,	39,457	47,727	48,632	37,239
May,	55,652	52,031	42,961	36,038
June,	28,922	45,661	43,409	36,661
Total in six months,	195,515	203,916	206,667	173,033
July, ...tons,	....	52,262	32,646	29,859
August,	....	40,232	18,820	32,545
September,	....	27,915	9,642	15,711
October,	....	19,149	7,836	10,903
November,	....	12,110	8,076	8,011
December,	....	8,879	11,742	11,802
Total in twelve months,	....	364,463	295,429	281,064

Congress, on the 17th July, passed an act authorizing the Secretary of the Treasury to raise $250,000,000, by loans and Treasury notes, for war expenses. Two tariff bills are now under consideration in Congress as we go to press with the concluding portions of this No. The results we will publish in our September No.

THE BOOK TRADE.

1. *The Works of Francis Bacon*, Baron of Verulam, Lord High Chancellor, &c. Collected and edited by JAMES SPEDDING, M. A. 12mo., Vol. vi. Boston: BROWN & TAGGARD.

The present volume of the Complete Works of FRANCIS BACON, while it forms the sixth volume in the order of publication, is the first volume of the entire series and also the first volume of the Philosophical Works. The remaining volumes will be published in regular order from volume one to ten, inclusive. In the first volume issued (volume xi.) was given a portrait of FRANCIS BACON, when a youth. The present volume, as the first of the series, properly contains his portrait at that period of life when these works were chiefly composed. The list of subscribers numbers nearly one thousand.

2. *The North American Review.* July, 1861. Boston: CROSBY, NICHOLS, LEE & Co.

The July number of the North American is just out. The following is the table of contents:—The Public Lands of the United States; Mrs. JANE TURRELL; The Venerable BEDE; BOUVIER'S LAW Dictionary and Institute; Life of Major ANDRE; French Critics and Criticisms; M. TAINE; Burial; The Attic Bee; FRANCIS BACON; Michigan; New Books on Medicine; The Right of Secession; HUGH LATIMER; Critical Notices; New Publications. The original paper on the Right of Secession, which is a review of JEFF. DAVIS' message to the rebel Congress, will be read with much interest.

3. *Cyclopedia of Anecdotes of Literature and the Fine Arts.* By KAYLITT ARVINE. One vol. octavo. Published by GOULD & LINCOLN, Boston.

It is hardly possible to speak too highly of this excellent work. The laborious industry of the author, has brought together an innumerable host of anecdotes from every attainable source. It is a charming volume to read, and after one has read it, invaluable as a book of reference; affording every facility for the latter purpose by its admirable arrangement and copious indexes. We can heartily commend it to all who like to be amused or instructed.

4. The American Tract Society, Boston, have published recently the following volumes:

1. *Life of* DANIEL SAFFORD. 80 cents. 2. SWEDENBORG *and his Doctrine.* By Professor POND. 50 cents. 3. *Songs for my Children.* Illustrated. 30 cents. 4. *Sunday Alphabet of Animals.* Illustrated. 30 cents. 5. *Aunt* KATIE'S *Talks at Bedtime.* 25 cents. 6. *Walks and Talks.* 25 cents. 7. *Stories for Little Ones.* 25 cents. 8. 48 *Envelope Tracts*, in neat package. 10 cents. 9. Books for the Soldiers: *Sketch of Capt.* HEDLEY VICARS; *Sir* HENRY HAVELOCK; *The Soldier's Mission; The Soldier's Text Book;* and other books in flexible covers, for the pocket and knapsack, each 10 cents.

These recent publications of the Tract Society, instituted at Boston, in 1814, will be found unusually interesting. Among those for children, The Sunday Alphabet, Stories for Little Ones, and Songs for my Children, are especially attractive; the latter possess all the charm of Mother Goose, with far more wisdom in its rhymes. SWEDENBORG and his Doctrines is a revised edition, in very neat form, of Professor POND'S well known work. The Memoir of DANIEL SAFFORD is one of the best religious biographies that we have ever read; it is a pleasantly written story of the outward and inner life of a devoted Christian. The books for soldiers, are also excellent, and we should be glad to have thousands of them distributed among the men of our army.

THE

MERCHANTS' MAGAZINE

AND

COMMERCIAL REVIEW.

Established July, 1839.

EDITED BY

J. SMITH HOMANS, (SECRETARY OF THE CHAMBER OF COMMERCE OF THE STATE OF NEW-YORK,)

AND WILLIAM B. DANA, ATTORNEY AT LAW.

VOLUME XLV. AUGUST, 1861. NUMBER II.

CONTENTS OF No. II., VOL. XLV.

ART. PAGE

I. THE RAIL-ROAD SYSTEM OF MASSACHUSETTS.—1. Wealth of Massachusetts. 2. The first Canal and the first Rail-Road. 3. Early Rail-Road progress in the Commonwealth. 4. Financial Policy. 5. Rail-Road Extension to Albany. 6. The Revulsion of 1857. 7. Horse Rail-Roads. 8. The Boston and Worcestor Rail-Road. 9. The Boston and Lowell Rail-Road. 10. The Boston and Providence Rail-Road. 11. The Eastern Rail-Road. 12. The Boston and Maine Rail-Road. 13. The Fitchburg Rail-Road. 14. The Fall River Rail-Road. 15. The Boston and New-York Central Rail-Road. 16. The Western Rail-Road. 17. The Troy and Greenfield Rail-Road. 18. Conclusions. 19. Recent Dividends,..... 113

II. INDUSTRIAL AND COMMERCIAL CITIES.—No. LXXX. BALTIMORE Imports and Exports. 2. Flour Inspections. 3. Tobacco Inspections, Exports and Stocks, 1848—1860. 4. Imports of Guano, 1849—1860. 5. Iron. 6. Coffee. 7. Coal Trade. 8. Oyster Trade. 9. Arrivals and Clearances,..... 131

III. COTTON, FLAX, WOOL AND SILK.—Their early History in the United States. 1. The first Legislation in Massachusetts in behalf of Domestic Industry. 2. Introduction of the Cotton Gin. 3. The first Exports of Cotton from the United States. 4. India Cotton and Silk Goods. 5. The use of Flax Fifty Years ago. 6. Effects of the Embargo and the War with England. 7. Steam Navigation and Rail-Roads. 8. The Impulse given to Manufactures by the Discovery of Gold in California,..... 136

IV. STATISTICS OF MANUFACTURES IN THE U. S. AND IN EACH STATE,.... 139

V. RATES OF TOLL ON THE NEW-YORK CANALS, 1861.—Established by the Canal Board on Persons and Property Transported on the New-York State Canals,..... 145

VI. COMPARATIVE PRICES OF LEADING ARTICLES IN THE NEW-YORK MARKET, on the 1st of May, in each year, from 1849 to 1861,..... 150

VII. IMMIGRATION OF THE PORT OF NEW-YORK.—The Ports whence Emigrant Passenger Vessels have arrived, together with the nationality and number of Vessels, and number of Emigrant Passengers and others from each Port,..... 152

VIII. THE NEW-YORK CLEARING HOUSE.—Exchanges and Balances each Month to October, 1860. Deposits, Circulation and Loans of the New-York Banks,..... 157

IX. REPORT ON THE HARBOR OF NEW-YORK.—1. Report on the Physical Surveys of New-York Harbor and the Coast of Long Island, with descriptions of Apparatus for observing Currents, &c. 2. Tides and Currents of New-York Harbor and its Approaches,..... 160

X. THE PRINCIPAL HARBORS AND RIVERS OF THE UNITED STATES.—Table showing the least water in the Channels of Harbors, Rivers and Anchorages on the Coasts of the United States. By an Officer of the United States Coast Survey,.. 168

XI. SHIP-BUILDING AND TONNAGE OF NEW-YORK AND THE U. S.—1. Statement exhibiting the number of American and Foreign Vessels, with their Tonnage and Crews, which entered into the several Districts of the State of New-York from Foreign Countries, during the fiscal year ending June 30, 1860. 2. Statement showing the Number and Class of Vessels built, and the Tonnage thereof, in the State of New-York, during the year ending June 30, 1860. 3. Statement showing the Number and Class of Vessels built, and the Tonnage thereof, in the several States and Territories of the United States, from 1815 to June 30, 1860, inclusive. 4. Recapitulation of the Number and Class of Vessels built in each State of the Union during the fiscal year ending June 30, 1860. 5. Statement exhibiting the amount of the Tonnage of the United States at various periods, also the Registered, and Enrolled and Licensed Tonnage employed in Steam Navigation each year,..... 178

XII. COMMERCIAL TREATIES WITH FOREIGN NATIONS, YEAR 1860.—1. Treaty of Amity and Commerce with Japan. 2. Paraguay,..... 184

CHAMBERS OF COMMERCE AND BOARDS OF TRADE.

The New-York Chamber of Commerce,..... 200

JOURNAL OF MINING AND MANUFACTURES.

1. Statistics of Lowell. 2. Michigan Copper Mines. 3. French Wines. 4. Flax Cotton. 5. New Mineral Discoveries in California. 6. New Silver Alloy,..... 205

FOREIGN CORRESPONDENCE OF THE MERCHANTS' MAGAZINE.

Stock of Cotton in England—W. S. Lindsay—European Exchanges—Bank of England—Bank of France—Advance in Railway Shares—Failures—Great Fire—New Iron Steamer Scotia—Board of Trade Returns—Social Science Association of August, 1861,..... 208

COMMERCIAL CHRONICLE AND REVIEW.

Meeting of Congress—Fiscal Year Ended—Foreign Imports at New-York, June, 1861—Same Years 1857-1861—Heavy Exports of Produce to Europe—Foreign Trade of New-York, 1851-1861—Export of Grain, 1861—Estimates of Revenue by the Secretary of the Treasury—Imports of Dry Goods at New-York—Foreign and Domestic Exchanges—Rail-Road Dividends, 214

THE BOOK TRADE.

Notices of new Publications in the United States,..... 222